#### **WEST Search History**

DATE: Tuesday, September 16, 2003

Set Name	Query	Hit Count	Set Name result set
DB=USP	T,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ	,	
L30	L29 AND human-growth-hormone	0	L30
L29	L28 AND human insulin	236	L29
L28	L27 NOT chimera	1018	L28
L27	L26 AND fusion protein	2521	L27
L26	L24 NOT Rosen-Craig.IN.	2900	L26
L25	L24 NOT Rosen-Craig.IN/	2901	L25
L24	L23 NOT Ashkenazi-Avi.IN.	2901	L24
L23	L22 NOT Rosen-Craig-A.IN.	2971	L23
L22	L17 NOT Ashkenazi-Avi-J.IN.	3165	L22
L21	L20 AND human insulin	124	L21
L20	L19 AND chimeric protein	321	L20
L19	L18 AND fusion protein	1654	L19
L18	L17 AND ((530/300  530/350 )!.CCLS.)	1689	L18
L17	L16 AND L10	3281	L17
L16	L15 AND human growth hormone	5184	L16
L15	insulin	45978	L15
L14	L13 AND hGH	119	L14
L13	L12 AND human insulin	664	L13
L12	L11 AND insulin	3281	L12
L11	L10 AND human growth hormone	4467	L11
L10	(chimeric OR fusion protein OR chimera)	49651	L10
L9	L8 AND hGH	143	L9
L8	L2 AND insulin	4231	L8
L7	L2 AND insulin AND human-growth-hormone	0	L7
L6	((C07K/)!.IPC.)	8	L6
L5	(C07K)	63212	L5
L4	((C07K/5)!.CCLS.)	0	L4
L3	C07K ((5/00 )!.CCLS.)	0	L3
L2	((530/300  530/350 )!.CCLS. )	13606	L2
L1	(530.CCLS.)	0	L1

**END OF SEARCH HISTORY** 

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5 ; Search time 34.4229 Seconds
(without alignments)
225.942 Million cell updates/sec
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SIDSI/gendata/geneseq/geneseqp.embi,AA1980.DAT:*

SIDSI/gendata/geneseq/geneseqp.embi,AA1980.DAT:*

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1 NEPTIPLSRLFDNAMLRARR......OBFSEAYIPRECKYSFJGNP 49
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1107863 segs, 158726573 residues
                                                                                                                                                                                                                                                                                       September 15, 2003, 11:44:15
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Maximum Match 100%
Listing first 45 summaries
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Sequence:
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                                                                                                                                                                                                                                                                                             Run on:
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Pred. No. is the number of results predicted by charce to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

		œ				
Result		Query				
NO.	Score	Match	Match Length DB	17.5	(1	Description
, ~	260	160.0		20	AAY42855	Buman arowth horre
~	250	100.0		20	AAY42856	Human growth hormo
e	260	0.001		20		hGH-mini-proinsuli
47	260	100.0		20		Buman anti-angloge
5	260	100.0		0.5	AAP91041	Buman growth holme.
Q	250	100.0		20	AAY42861	Chimeric protein.
r-	260	100.0	192	10	NAP90129	Human growth hormo
80	260	100.0		20	AAW92264	Suman anti-angloge
σ	260	100.0		10	AAP91299	Human nerve growth

0 H Z	260 260 250	100. 100. 100.	000	262 262 310	7 12 11	AAP61033 AAR11740 AAR03255		Human beta Human grow Fusion pro	eta-nerve g growth hormo protein of	9 E 9
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RESULT 1										
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents a chimeric protein, which contains an N-terminal fragment of human growth hormone (hGH) of the sequence given in AAP42885, a cleavable peptide linker (AAY4285), and a human insuiin precursor comprising insulin A and B chains (AAY42859). The hGH portion of the chimeric protein acts as an intramolecular chaperone (IMC) for the insulin precursor, enabling it to fold correctly. The cleavable ceptide linker has a C-terminal Arg residue which enables the hGH portion of the chimeric protein at provise human insulin via an hGH-proinsuin chimeric protein can provise human insulin with correctly linked cysteine bridges with fewer necessary procedural steps, and hence resulting in a higher yield of human insulin. The IMC sequences not only protect insulin sequences from intracellular degradation by a microorganism host, but sopenences from intracellular degradation by a microorganism host, but show promote the folding of the fuscon insulin and decrease the internolecular colubility of the fusion protein and decrease the internolecular colubility of the fusion proteins, thus allowing folding of the received insulin precursor at commercially useful high concentrations. The procedural steps of cyanogen bromide cleavage, oxidative sulphitolysis and related purification steps can thus be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobic absorbect
                                                                                                                                                ÷:
   protein, which contains a thrombin recognition site, and bumman beta nerve
            growth factor (beta NGF) at the C-termina. Beta-NGF can be used to control geriatric dementia and other nervous disorders, and can be released from the fusion protein by incubation with thrombin (see AAN90577-8, AAP91034, AAP91299).
                                                                                                                                                Saps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New chimeric proteins containing human growth hormone fragment, used particularly for the production of human insulin
                                                                                                                                                                                                                                                                                                                                                                                             Insulin; precursor; growth hormone; chaperone; intramolection; folding; conformation; chimeric protein; cleavable; recombinant;
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                                                                                                                                                                                         100.0%; Score 260; DB 10; Length 140; 190.0%; Pred. No. 7.3a-25; ive 0; Mismatches 6; Indels 6
                                                                                                                                                                           1 MFPTIPLSRLFDNAMLRAHRLHCJAFDTYGEFEBAYIPKBOKYSFLONP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 14; Page 30-31; 46pp; English
                                                                                                                                                                                                                                                                             AAY42861 standard; protein; 150 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-CN00052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-CN00052
                                                                                                                                                                                                                                                                                                                                                                    Chimeric protein, SEQ 1D 7
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                                                                                                                               Similarity 100.
49; Conservative
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                                                                                        140 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                          production; yie.d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09950302-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAR-1998;
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                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention consists of a vector contg. a fusion protein which is formed by ligating, downstream of a promoter, hGH or a deriv. (pref. formed by subtstn. of Met-14 with Leu) and a foreign protein. Stability of the vector in the host is greatly increased so the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human
stability
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                                                                                                                                    1 HFPTIPLSKLFDNAMLRAHKLHQLAFDTYQEFEEAYIPKEOKYSFLQNP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MFPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                        Length 150:
                                                                                                                1 MFPTIPLSRLFUNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MFPTIPLSRLFUNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP
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to foreign protein, for
                                      . 53 20;
7.9e-25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein yield is higher. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 260;
100.0%; Pred. No. 16
                                      100.0%; Score 260;
100.0%; Pred. No. 7
                                                                                                                                                                                                                                                      AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW92264 standard; Protein; 192 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure: Fig 1: 19pp: Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Recombinant vector contq. fusion growth hormone or deriv. Ligated
                                                                                                                                                                                                                                                    AAP90129 standard; protein; 192
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                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                  (updated)
(revised)
                                                                                                                                                                                                                                                                                                                                                                                                               Human growth hormone
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Matches 49; Conserv
                                                         Local Similarity
es 49; Conserv
150 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-DEC-1987;
                                                                                                                                                                                                                                                                                                                              25-MAX-2003
06-FEB-1996
01-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JP61144981-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-DEC-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-73N-1989
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5

Gaps

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Human anti-angiogenic peptide hGH Met-lPhe191
                                                                                                                          Example 3; Page 49; 87pp; English.
                                                                                                                    variant or human prolactin
08-JUN-1999 (first entry)
                                                                                      (REGC ) UNIV CALIFURNIA
                                                                                                   WPI; 1999-045192/04.
N-PSDB; AAX01706.
                                                            WO9851323-A1
                                                                               13-MAY-1997;
                                                                         12-MAY-1998;
                                                                                                                                                                                                                             dysfunction
                                                                  8561-ACN-61
                                                                                             Martia: JA,
                                                                                                                                                                                                                                    Sequence
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Taylor R,

Struman I,

98WO-US95691 97US-0046394

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N-terminal end (1st region), a 3 amino acid sequence representing thrombin recognition site, and human beta nerve growth factor (beta-NGF) at the C-terminal. Beta-NGF can be used to control geriatric dementia and ether nervous disorders, and can be released from the fusion protein by incubation with thrombin (see AAN90577-8, AAP91034,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human nerve growth factor gene encoding fusion protein having cleavage site for thrombin, useful for treating geriatric
                                                                                                                                                                                                                                                                                                                                                                                                                                          Human nerve growth factor and human growth hormone fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human nerve growth factor: lusion protein; thrombin;
gerlatric dementia: nervous disorders; human growth hormone.
                                                          1 MEPTIPLSREFONAMERAHREHQLAFOTYGEFFRAYIPKFOKYSFLONP
                                                                                            Indels
indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fusion protein consisting of human growth hormone at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 250; DB 10;
Pred. No. 1.5e-24;
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0
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   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 36; page 31-32; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP61033 standard; Protein; 262 AA.
                                                                                                                                                                                                                                                                   AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                   AAP91299 standard; protein; 261
   6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89EP-0102795.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88JP-0035042.
                                                                                                                                                                                                                                                                                                                                                                                   (tirst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-OCT-1991 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.140
141.143
144..261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
      49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            domo sapiens (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1989-243092/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Rest Local Similarity
Matches 49; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TOYJ ) TOSOH CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          261 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dementia, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-FEB-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-FEB-1989;
                                                                                                                                                                                                                                                                                                                                                                                      14-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-AUG-1989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EF329175-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohtsuka E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF91041)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAP61033;
                                                                                                                                                                                                                                                                                                                           AAP91299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Region
Region
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP6:033
                                                                                                                                                                                                            RESULT 9
                                                                                                                                                                                                                                          AA1191239
                                                                                                                                                                                                                                                                                                                           XAX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention describes novel human anti-anglogenic peptides derived from 10 to 150 consecutive amino acids selected from the N-terminal cnd of from 10 to 150 consecutive amino acids selected from the N-terminal cnd of human placeth hormone (hGH) growth commone variant (hGH-V), or human probation. Such peptides (i) inhibit capillary endothelial cell proliferation and organisation (ii) inhibit anglogenesis in chick choicelantoir membrane and (iii) binds to at capillary endothelial cell proliferation and organisation (ii) inhibit angionessing a probable abnormality of placental vascularisation during prequancy. The peptides can he used for treating an anglogenic disease in modulating vascularisation of a patient's placental in particular, the peptides can be used for prevention arthritic such as rheumatoid anglotibroma, arteriovenous melformation arthritic such as rheumatoid carthritis, atherosciencia prodiferation arthritic such as rheumatoid carthritis, atherosciencia prodiferation grant and as those pocurring content proportion and prodiferation such as those pocurring such as supporting your as content would healing the prodiferation arthritis such as those pocurring such as supporting to a such as such as such as importance of the produces of the prodiferation are not as those pocurring such as supporting to modularial such as such 
                                                                          numan; anti-anglogenic; projectin; placental lactoment STD; anglosenss: growth hormone; hGB; hGH-V; capiliary endoLoila; eth profiteration; pracental vascularisation; preparancy; steatment; endingent; dispersor tumour; inhibitor; malignant; anglofibroma; arteriovencus malignant; anglofibroma; arteriovencus malignant; anglofibroma; arteriovencus malignant; anglogis profiterative reclinopathy; manilar mechanismalario; glaucoma; ocalis; uveitis; tracture; Osier-Weber syndroma; psorhasis; fibroplasia; sceroderma; Kapopathy; manilar denomeration; ulcer; leikaemia; reproductive disorder; conframenty; pre-eclampsia; intrautorine arowth retardation; placental dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pyogenic glaucoma, retrolental fibroplasia, scierodérma, solid turnours. Asposi's sarcoma, trachona, vascular adhosions, chronic varieose eletas. Leukaemia, and reproductive disorders such as follicular and luteal eyste and choriocarcinoma. They can also be used as contraceptive ugents. INA encoding the peptides can be used in gone therapy. The measurement of abnormal levels of Kiterminal Iraqments of hGB. EGH. V, prolactic or hit can be used in assays for implimment of vascular development associated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mal levels of N-terminal fragments of hGH, fighty, prolactic cope used in assays for implirment of vascular development assoc pre-eclampsia, intrauterine growth retardation, and placental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New anti-anglogenic peptides - comprise N-terminal tragments of human placental lactogen, human growth hormone, growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 20; Length 192:
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Pred. No. le-24;
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Gaps

100.0%; 100.0%;

Query Match Best Local Similarity

192 AA;

protein

у

in presence

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Gaps

; 0

**5 7** 

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can be produced as this fusion protein. It is purified by contacting a gei having a cation exchange qp. with the fusion protein, in the presence of urea. The purified protein is useful in a medicament for treating disorders of the nervous system, eg dementia. (Updated on 25-MAR-2063 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     interleuxin-6; B-cell differentiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prepn. of human B-cell differentiation factor - from specified DNA sequence segment, by recombinant DNA technique, gives protein of specified amino acid sequence.
                                                                                                                                                                                                                                                                                           ch 100.0%; Score 260; DB 12; Length 262; 1 Similarity 100.0%; Pred. No. 1.5e-24; 49; Conservative 6; Mismatches 0; Indels 0
                                                                                                        A recombinant human nerve growth factor beta subunit-contg.
                                                                                                                                                                                                                                                                                                                                                                                                      1 MEPTIPLSRIFONAMERAHKLHQLAFDIYQEFBEAYIPKEQKYSFLQNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fusion protein of B-cell stimulatory factor-2 and B-cell
  contacting with gel having cation exchange gp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą
                                                                 ; fig 1; 7pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 31; Page 9; 17pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AARC3255 standard; protein; 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B-cell stimulatory factor-2; i
interreukin-5; fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88JP-0162556.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            differentiation factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WFI; 1990-062207/09
                                                                                                                                                                                                                                                                                                            Best Local Similarity
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Matches 49; Comserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GROY HOSOT ( LYOT)
                                                                                                                                                                                                                                                      262 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                310 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB: AA002028
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUL-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-JAN-1990.
                                                                   Disclosure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR03255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence
                                                                                                                                                                                                                                                      Seguence
                                                                                                                                                                                                                                                                                               Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                       urea
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
AAR04255
    FFXXXX000000XX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human growth hormone/human narve growth factor beta fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The protein is a direct translation of the upstream typtophan promoter-operator lacking its attenuation secuence and human beta-NGF sequence. The product may be efficiently expressed from transformed E.coii expression system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3. MPPTIPLSRLEDNAMIRAH 4.0302APUTYOEFEBAY 1PKEOKYSFLOND 4.9
77.1117.7117.7117.71117.71117.7111.71111.7111.7111.7111.7111.71117.71117.7117.7117.7117.7117.7117.7117.7117.7117.7117.7117.7117.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717.717
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               - used in prodm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene segment of human nerve growth factor - a NGF-producing recombinant Escherichia strain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hGH; hNGF; nervous system diseases; dementia
                 Human beta-nerve growth factor gene product.
                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 32; Page 482; 71pp: Japanese.
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(first entry)
                                                             Beta-NGF; E.coli; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    See also AAN63816-7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1991-128768/18
                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1986-281696/43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TOYJ ) TOSOH CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             262 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-PSDB; AA011578
                                                                                                                                                                                                                                                                                                                                                                          (OISU/) OTSUKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP03067598-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-AUG-1989;
                                                                                                                                                                                                                                                                                                                                  09-MAR-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                        Homo sapions
                                                                                                                                                                                                                                                                                           09-MAR-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-2003
25-JUN-1991
                                                                                                                                                                                                                                                  11-SEP-1986
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR11740
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0
The protein is produced by fusing DNA encoding BDF (IL-) with DNA encoding BSF-2 (IL-5) and ligating the product into an expression vector Sec also AAR05311 and AAR05313.
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                   .;
0
                                                                                                                                                Length 310;
                                                                                                                                                                                                                                                                             1 MFPT12LSRLFDNAMLRAHRLHQLAFDTYQEFEEAY1PKEQKYSFLQNP
                                                                                                                                                                                                   Indels
                                                                                                                                              100.0%; Score 260; DB 11;
ilarity 100.0%; Pred. No. 1.8e-24;
Conservative 0; Mismatches 0;
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The polypeptide (AAFB1225) with somatomedin-like activity and the DNA (AANB165) emcoding it are claimed. A Met residual gp. may be added to the N-Terminal. The polypeptide acts on the bone structure of mammals, including humans, to promote bone growth. The polypeptide has high production rate and is easily extracted from bacterial culture medium and retined for use as a bone growth accelerator.

(Updated on 25-MAK-2003 to correct PA field.)
                                                                                                                 Recombinant human growth hormone having collagenase recognition region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 204;
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                                                                                                                                                                                                                                                                                                                                                                                                                          1 MEPTIPLSRIFONAMIRAHRINGLAFDTYQEFEEAYIPKEGKYSFLGNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acob
                                                                                                                                                                                                               The invention relates to recombinant human growth hormone
                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polypeptide with sematemedin-like activity - by culturing bacterium transformed by plasmid contq. segment with specified DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence of protein with somatomedin-like activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 3e-24;
                                                                                                                                                                                                                                                                                                                                 Score 256; DB 23;
Pred. No. 3.5e-24;
                                                                                                                                                                                                                                                                                                                                                                              1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2(1): Page 609: 9pp: Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP81226 standard; protein; 138 AA.
                                                                                                                                                                   Disclosure; Fig 3: 8pp; Korean.
                                                                                                                                                                                                                                           collagenase recognition region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TOYL ) TOYO SODA MES CO LID.
                                                                                                                                                                                                                                                                                                                                 98.5%;
98.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (updated)
                                                                                                                                                                                                                                                                                                        Query March
Sest Local Similarity
Thes AB, Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1986-232632/33.
N-PSDB; AAN81605.
                                            WPI: 2002-185396/24
N-PSDB: ABL55999.
                                                                                                                                                                                                                                                                                     204 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       138 AA;
    Scng YH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-DEC-1986;
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20-NOV-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAP81226;
                                                                                                                                                                                                                                                                                       Segmence
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Yoc 76,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HESULT 15
AAPR1226
  SX COX S EX EX S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C C X S C X S C C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X S C X
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence encoding this protein can be fused with DNA escoding 3-cell differentiation factor (IL-6; and ligated into an expression vector for prodm. of a fusion protein. See also AAR65311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Preps. of human B-cell differentiation factor - from specified that sequence segment, by recombinant DNA technique, gives protein of specified amino acid sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MEPTIPLSKLEDNAMLKAHFLHQLAFDTYQREEEAYIPKEGKYSFLGNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 144:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stapu:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human growth hormone with collagenase recognition site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human: growth hormone; collagenase; recognition site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 257; DB 11:
Pred. No. 1.8e-24;
I; Mismatches 0;
                                                                                                                                                                                    Segment of B-cell stimulatory factor-2 (IL-5).
                                                                                                                                                                                                                                   B-cell stimulatory factor-2: interleukin-5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABB77327 standard: Protein; 204 AA.
                                            AAR05313 standard; protein; 144 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure: Page 9: 17pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98.88;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88JP-0162556
                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI: 1990-062207/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TOYC ) TOSOH CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
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                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                               JP02013375-A
                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUL-1988;
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                                                                                                                                     19-JUL-1990
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                                                                                         AAR05313
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Sequence 1, Appli
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Sequence 10, Appli
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Sequence 10, Appli
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                                                                                              September 15, 2005, 11:57:40; Search time 11:2401 Seconds (without alignments) [84.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by charce to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
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1 MFPTIPLSRLFUNDMLRAHR.....QEFEEAVJPKEQKYSFUQNP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.6
Copyright (v) 1993 - 2003 Compagne 1.16.
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                                                                                                                                                                                                                                                                                            328717 seqs, 42310858 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                 OM protein - protein search, using sw model
                                                                                                                                                                                                                                         BLCSUM62
Gapop 10.6 , Gapext 0.5
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Maximum DB seq length: 2003000003
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Score Match Length DB
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Perfect score:
Sequence:
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Sequence 8, Appli Sequence 1, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Patent No. 52,0180 Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 6, Appli	Growth Hormone
1 US-08-468-824-8 2 CS-08-751-728-1 4 US-08-331D-4 1 US-08-388-267C-2 4 US-08-388-267C-2 4 US-08-388-267C-2 1 US-07-726-2 4 US-07-621-197C-2 1 US-07-621-197C-2 1 US-07-621-197C-2 2 US-08-383-621-1 3 US-08-383-621-1 3 US-08-39-906-1 4 US-08-39-906-1 3 US-08-39-105-651-3 4 US-08-710-324A-6 4 US-08-710-324A-6	Pression of Boving  Blvd  Elvd  S3,383
63.3 68.1 68.1 68.2 61.3 61.3 61.3 61.3 61.3 61.3 60.8 60.8 60.8 60.8 60.8 60.8 60.8 60.8	T
28	2007.1. AP PR 33 33 34 44 44 44 44 44 44 44 44 44 44
	# CD

REFERENCE/DOCKET NUMBER: 46C4 TELECOMMUNICATION INFORMATION: TELEPRIONE: 415/25-352 TELEPRAX: 415/952-9881

IELEKAX: 415/952-9881
TELEX: 910/371-7166
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 192 amino acids
TYPE: amino acid

NAME: Johnston, Sean A. REGISTRATION NUMBER: P35,910

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Gaps
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PPLICANT: Sedon, Andrew P.
TILLE OF INVENTION: Stabilization of Somatotropins and Other
TILLE OF INVENTION: Proteins by Modification of Cysteine Residues
TILLE OF INVENTION: Proteins by Modification of Cysteine Residues
CORRESPONDENCE ADDRESS:
ADDRESSER: American Cyanamid Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 PPTIPLSKIFBNAMIKAHKIHQLAFDTYQEFEBAYIPKEGKYSFLQNP
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ZIP: 07470-8426

MEJULIA TABLABLE FORM:

MEDULICH TYPE: Floppy Gisk

COMPUTER: IBM PC COMPATIBLE

COMFOUTER: SYSTEM: PC-DOS/MS-DOS

SOSTWARE: PATENTIN RELEASE #1.0, Version #1.25

CURRENT APPLICATION DAIA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match 98.1%; Score 255; DB 2; is Best Local Similarity 100.0%; Pred. No. 2.5e-29; Matches 48; Conservative 6; Mismatches 0;
                                                                                                                                                                                                                                              NAME: Tsevdos, Escelle J.
REGISTRATION NUMBER: 31,145
REPERROCE/DOCKET NUMBER: 31,278-01
TELECOMMUNICATION INFORMATION:
FELEPHONE: 203-31-2971
TELETA: 203-710-474-4659
INFORMATION: REGISTRATED: SEQUENCE CHARACTED: STOLENCE CHARACTED: STOLENCE: 154 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/JOCKET NUMBER: 31,278-03
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-831-3247
                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/766.142
FILLNG DAIE: 25-SEP-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/459,906
FILLING DATE: 02-JUN-1995
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/04459906
Fatent No. 6010999
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Buckwalter, Brian L.
Cady, Susan M.
Shieh, Hong-Ming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Webster, Darryl L. REGISTRATION NUMBER: 34,276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               One Cyanamid Plaza
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : 194 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               261-831-3305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MCLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
// MOLECULE TYPE: protein
US-08-459-906-4
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STATE: Now Jersey
COUNTRY: U.S.A.
ZIP: 07470-8426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KESULT 4
US-08-459-906-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-383-621-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Statement Martha Superrero
APPLICANT: Statement Hard Superrero
APPLICANT: Saldana, Hugo Barrera APPLICANT: Saldana, Hugo Barrera APPLICANT: Salvado, Jose Maria Viader
APPLICANT: Salvado, Jose Maria Viader
TITLE OF INVENTION: Genérically Modified Methylotrophis P. pustures Verset : 11TLE OF INVENTION: Genérically Modified Methylotrophis Production and Secretion of the Human Growth Horsone
FILE REPERENCE: 1829,001306 CURRENT APPLICATION NUMBER: US/05/284,878
PRIOR FILING DATE: 1997-10-21
NUMBER OF SED 16 NOS: 9
SOFTWARE: Patentin Ver. 2.1
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         =
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J. GENERAL INFORMATION:
APPLICANT: Buckwaller, Brian L. APPLICANT: Shieh, Hong-Wing APPLICANT: Shieh, Hong-Wing APPLICANT: Seddon, Poter APPLICANT: Seddon, Profession Of Somatotropins And Other TITLE OF INVENTION: Profession Dy Cysteine Residues
                                                                                                                                                                                                                                                    .;
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ن
                                                                                                                                                                                                                                                                                                                                                 1 MEPTIPLSRIFONAMIRABRIHQLAFDTYQEFESAYIPKECKYSFLONP 49
                                                                                                                                                                                                                                                                                                                                                                                                     HELLETTE TILLETTE TELEVISION OF THE TELEVISION TO AMERICAN ASSET OF THE TELEVISION ASSET OF THE TELEVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 PPTIPLSELEGNAMIRARATAQUAPDIVOBEREAVIPKEGKYSFLGNP 49 [1,1]1111;1]111;1]111,1]111,1]111,1]111,1]11,1]11,1]11,1]11,1]11,1]11,1]11,1]11,1]11,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1,1]1
                                                                                                                                            Query Match
192, Score 260; CH 1, Length 192, Best Local Similarity 100.0%; Pred. No. 4.66-30; Matches 49; Conservative 6; Mismatches 6; Indels 6
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Best Local Similarity 100.0%: Pred. No. 2.4e-29;
Matches 48; Conservative 0: Mismatches 0; Indels
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COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILLOATION NUMBER: US/08/383.621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Dr. Estelle J. Tsevdos
STREET: 1937 West Male Street, P.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JMBER: US/08/383,621
06-FEB-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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U.S.A.
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US-09-284-878-5
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STREET: 1997
FTTY: Stamford
Franceti
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191
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US-09-284-878-5
                                         US-C8-093-383-1
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us-09-423-100-1.rai

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APPLICANT: No. 5194176mington, Karl D.
APPLICANT: Clark, Samuel A.
APPLICANT: Thippen Anice E.
APPLICANT: Wanded, Christian
APPLICANT: Kruse, Fred
TITLE OF INVENTION: RECOMBINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CELL LINES
CORRESPONDENCE ADDRESS:
                                         APPLICANT: Quadde, Ciristian
APPLICANT: Kruse, Fred
APPLICANT: McGarry, Dennis
TITLE OF INVENTION: SECRETORY CELL LINES
NUMBER OF SEQUENCES: 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 3; Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                        COMPUTER FAIDABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEW: PC-DS/MS-DOS
SOFTWARE: PATENTIN FELOAS #1.0, Version: #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/784,582
FLING DATE: CONCURTENTLY HERWITH
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: US 60/028,427
FILING DATE: 15-OCT-1996
PRIOR RPPLICATION NUMBER: US 60/028,427
FILING DATE: 15-OCT-1996
PRIOR RPPLICATION NUMBER: US 60/028,427
APPLICATION NUMBER: US 60/028 #11NG 30/0587
APPLICATION NUMBER: US 60/0589,026
FILING 30/0587
APPLICATION NUMBER: US 60/0589,026
FILING 30/0587
APPLICATION NUMBER: US 60/0589,026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 255; DB 3; ; Pred. No. 2.9e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98.1%; Scor.
105.6%; Pred. No. 2...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Newgard, Christopher B.
Halban, Philippe A.
No. 6194176mington, Karl D.
Clark, Samuel A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Highlander, Steven L. RESISTRATION NUMBER: 37,642 REFERENCE/DOCKET NUMBER: 0TSD:514 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Arnold, White & Durkee STREET: P.O. Box 4433
                                                                                                                                                                                                      Arnold, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/08785271
Patent No. 6194176
Clark, Samuel A.
Thigper, Anice E.
Quadde, Christian
Kruse, Fred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: 512/418-3000
TELEFAX: 512/474-7577
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amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cuery Match
Hest Local Similarity 100.0
Matches 48: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
SECUENCE CHARACTERISTICS:
                                                                                                                                                                                                    AUDRESSEE: Arnold, Wh.
STREET: P.O. Box 4433
CITY: Houston
                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                        Texas
                                                                                                                                                                                                                                                                        STAIL.
COUNTRY: USA
TTD: 77210
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US-68-785-271-10
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APPLICANT:
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                           APPLICANI:
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CITY: H
                                                                                                                                                                                                                                                                      STATE:
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TITLE OF INVENTION: Recombinant Expression of Proficins From
TITLE OF INVENTION: Secretory Cell Lines
NUMBER OF SECURICES: 50
CORRESPONDED ADDRESS:
ADDRESSEE: Arnoid, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 PPTIPLSRLFDNAMLRAHRLHQLAFDTYQRFEEAYIPKEQKYSFLQNP 49
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                                                                                                                                         Query Match 98.1%; Score 255; DG 7; Leneth 217; Best Local Similarity 100.0%, Pred. No. 2.94-29; Matches 48; Conservative 0; Mismatches 6; Indeis
                           Length: 1947
                                                                      C; Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLEM LINE: TAGGE, ALSO
COMPULER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALCELLIN Release #1.6, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/03/589,028
FILING DATE: Concurrent./ Herewith
CLASS!FICALION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Righlander, Steven L.
REGISTRATION NUMBER: UISD:426\HYL
TELEPROCE/DOCKET NUMBER: UISD:426\HYL
TELEPROCE/DOCKET NUMBER: UISD:426\HYL
TELEPROCE (512) 418-300:
TELEPRATION SEQ ID NO: 10:
                         98.1%; Score 255; FH (; ; 100.0%; Fred, No. 2.56 29; Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Newgard, Christopher B.
Halban, Philippe A.
No. 6116707mington, Karl D.
                                                                                                                                                                                                                                                                                                                             APPLICANT: Newgard, Christopher B.
APPLICANT: Halban, Philippe
APPLICANT: No. 6087129mington, Karl D.
APPLICANT: Clark, Samuel A.
APPLICANT: Thiqpen, Anice E.
APPLICANT: Quande, Christian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5: Arnold, White & Durkee P. O. Box 4433
                                                                                                                                                                                                                                                        Sequence 10, Application US/08589028
Patent No. 6087129
GENERAL INFORMATION:
APPLICANT: Halban, Christopher B
APPLICANT: Halban, Philippo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 77210-4433
COMPUTER REACABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGIH: 217 amino acids TYPE: amino acid
                                               Best Local Similarity 100.
Matches 48; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 77210-4433
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STREET: P. .
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                           Query Match
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APPLICANT: Olazaran, Martha Guerrero
APPLICANT: Saldana, Huga Barrera
APPLICANT: Saldana, Huga Barrera
APPLICANT: Salvado, Jose Maria Viader
TITLE OF INVENTION: Genetically Modified Methylotrophic P. pastoris Yeast for t.
TITLE OF INVENTION: Production and Secretion of the Human Growth Hormone
FILE REFERENCE: 1829-07:00000
CURRENT APPLICATION NUMBER: US/09/284.878
PRICR APPLICATION NUMBER: PCT/MX97/00033
PRICR APPLICATION NUMBER: PCT/MX97/00033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 FPTIFLSKLFUNAMLRAHRIHQLAFUTYQEFEEAYIPKEOKYSFLUNP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9#13%; Score 255; DB 3; Length 217;
100.0%; Pred. No. 2.9e-29;
.ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: Puptide inCATION: 192..210 CTHEM INFORMATION: //coter "The peptides above are CTHEM INFORMATION: depicted in Figure 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96.1%; Score 255; DB 4; 1
100.0%; Pred. No. 2.9e-29;
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Patent No. 63923816
GENERAL INFORMATION:
APPLICANT: HANLL SYNTHETIC FIBER CO., LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Pred. http://www.nches
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  TELECOMMUNICATION INFORMATION:
TELEFAX: 415-496-1200
                                      INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACIER:STICS:
LENGTH: 217 aming acids
                                                                                                   LENGTH: 217 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 9 SOFTWARE: Patentin Ver. 2.1
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Rest Local Similarity 150.0
Rest Local Similarity 150.0
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Pest Local Similarity (00)
Matches 48: Conservative
                                                                                                                                             single
                                                                                                                                                                               MOLECULE TYPE: protein
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133..153
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CRGANISM: Homo sapiens
                                                                                                                                                                                                                          NAME/KEY: Peptide
                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                          94..115
                                                                                                                                                                Linear
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US-09-424-620B-25
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                                                                                                                                                                                                                                             COCATION:
                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                          : NOTING:
                                                                                                                                                                TOPOLOGY:
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APPLICANT: Altmann, Scott W.
APPLICANT: Rack, Fernando ...
APPLICANT: Bazan, J. Fernando
APPLICANT: Rastclein, Robert, A.
TITLE OF INFWIJON MUTATIONAL, VARIANIS OF NAMMIJAN PROTEINS
NUMBER OF SEGUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 FPTIPLSRLFUNAMLRAHRLHQLAFOTYQEFEBAYIPKEQKYSFLONP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Longth 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: INM PC COMPATIOLE
OPERATING SYSTEM: PC-DOS/MS-UGS
SOFTWARE: PATOMIN PC-DOS/MS-UGS
SOFTWARE: PATOMIN PC-DOS/MS-UGS
CURRENT APPLICATION DATA:
CLASSIFICATION NUMBER: US/05/785.271
FILING DATE: Concurrently Herowith:
CLASSIFICATION: 435
PRICK APPLICATION UMBER: US-US/589,028
FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/C8/759,628 FILING DATE: 05-DEC-1996 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 255: DH 3; I
Pred. No. 2.9e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 106.0% Pred. No. 2.99
Oneservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                     NAME: Highlander, Stever L.
REGISTRATION NUMBER: 37,642
REFERENCE/DOCKET NUMBER: (TSD:513
TELECOMMUNICATION TREORMATION:
TELEPHONE: 512/418+3000
TELEPHONE: 512/474-7577
INPORMATION FOR SEQ. ID NO: 16: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: DNAX RESCURCH INSTITUTE
STREET: 901 California Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 60/008,574
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REGISTRATION NUMBER: 34,(90
REFERENCE/POCKET NUMBER: DX05520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 94304-1104
COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
CMEDIUM TYPE: BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11, Application US/08759528
Patent No. 6225446
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APPLICATION NUMBER: US 6(
FILING DATE: 06-DEC-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 217 amino acids
                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Palo Alto
SIATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
STATE: Texas
                                      77210
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US-08-759-628-11
                   COUNTRY:
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                                                APPLICANT: Clark, Samuel A.
APPLICANT: Thigpen, Anice E.
APPLICANT: Thigpen, Christian
APPLICANT: McGarry, Dennis
APPLICANT: McGarry, Dennis
TITLE OF INVENTION: RECOMPINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CELL LINES
CORRESPONDENCE ADDRESS:
                          2 FPTIPLSRLFDNAMLRAHRIHGLAFDTYQEFEEAYIPKEGKYSFLONP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPIIPLSRLFDNAMLRAHRLHQLAFDTYGEFEEAYIPKEQKYSFLQNP 49
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COMPUTER: IHM PC COMPATIDLE
COMPUTER: IHM PC COMPATIDLE
COMPUTER: IHM PC COMPATIDLE
COMPUTER: IHM PC COMPATIDLE
COMPUTER: PATENTIAN PCDS/MS-DOS
SOFTGARE: PATENTIAN PATA:
APPLICATION NUMBER: US/08/784,882
FILING APPLICATION 435
PRIOR APPLICATION 435
PRIOR APPLICATION NUMBER: US 60/028,427
FILING DATE: 15-OCT-1996
PRIOR APPLICATION NUMBER: US 08/589,028
FILING DATE: 13-14AN-1996
ATTCRNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                              Halban, Philippe A.
No. 6110737mington, Karl D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3: Arnold, White & Durkee P.O. Box 4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Highlander, Stoven 1. REGISTRATION NUMBER: 37.642 REFERENCE/MOKET NUMBER: JTSD:514 TELECOMMUNICATION INFORMATION: TELECHONE: 512/418-3000
                                                                                                                                                                                                                                                           Newgard, Christopher B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-784-592-73

Sequence 73. Application US/08784582

Patent No. 6110707

CENERAL INFORMATION:
                                                                                                                                                                                    Sequence 71, Application US/08784582
Patent No. 6116707
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Rest Local Similarity
Matches 48; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : TOPCLOGY: linear
US-08-784-582-71
                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
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                                                                                                                                                              rs-584-582-71
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                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
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                                                                                                                                                              efficient expression vector from Sachardmynes corPVisiae
                                                                                                                SEONG, Baik-Lin
INVENTION: Process for proparting recombinant proteins using Arably
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Masaaki
TITLE OF INVENTION: DNAS ENCOLING NEW FUSION PROTEINS AND PROCESSES FOR
TITLE OF INVENTION: PREPARING USEFUL POLYPEPTICES THROUGH EXPRESSION OF THE
TITLE OF INVENTION: DNAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gabs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence: Designated is OTHER INFORMATION: an amino acid Sequence of MWF8p-MWFmp26-TEV-6-GH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 FPTIPLSRLFDNAMLRAHNLHQLAFDIYQEFEBAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match 98.1%; Score 255: DB 4: Length 241: Best Local Similarity 100.0%, Pred. No. 3.38-29; Matches 48; Conservative 6; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98.1%; Score 255; DB 4; Length 245; 100.0%; Pred. No. 3.38-29; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb storage
                                                                                                                                                                                                                                ADDRESSEE: BACHMAN & LAPOINTE, P.C.
STREET: Suite 1201, 900 Chapel Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: 382.1026
CURRENT APPLICATION NUMBER: 08/09/280,000A
CURRENT FILING DATE: 1999-03-76
EARLIER APPLICATION NUMBER: JF10-87339/1938
EARLIER FILING DATE: 1998-03-1
NUMBER OF SEQ ID NOS: 66
SQO ID NO 66
LENGTH: 245
                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM
CORRUTTER: SYSTEM: WINDOWS 95/98
SOFTWARE: MS WORD
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/424.620B
FILING DATE: 24-NO. 6391585-1999
INFORMATION FOR SEQ 1D NO: 25:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear

MOLECULE TYPE: PROTEIN

SEQUENCE DESCRIPTION: SEQ ID NO: 25:
US-09-424-6208-25
                                                                                                                                                                                  NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: BACHMAN & LAPOINTE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 66. Application US/09280030A
Patent No. 6506595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 241 amino acids TYPE: amino acid
                   MOON, Jac-Woong
BAE, Cheon-Soon
                                                               YANG, DOC-SUK
LEE, Jee-Won
SEONG, Baik-Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Sato, Seiji
APPLICANT: Higashikuni, Naohiko
JANG, Ki Ryong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                         CITY: New Haven
STATE: Connecticut
                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100. Matches 48; Conservative
                                                                                                                                                                                                                                                                                                                        COUNTRY: U.S.A.
ZIP: 06510-2802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                        TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1:
US-09-280-030-66
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                                                                                                                                                                                                                           2 FPTIPLSRLFDNAMLRAHRLHQLAFOTYQEFEEAYIPKFQKYSFLQNP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Quory Match 95.8%, Score 249, DB 1; Length 217; Best Local Similarity 97.9%, Pred. No. 2.18-28; Matches 47; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: ROSEN: E1 AL.
TITLE OF INVENTION: Human Growth Hormone
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: CAPELLA, BYRNE, BAIN, GILFILLAN,
ADDRESSEE: CECCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STATE: NEWSLAND
STATE: NEWSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: September 15, 2003, 12:05:30 cbb time : 12.2401 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ÖPERATING SYSTEM: MS-DOS
SOTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/187.755C
FILING DATE: January 27, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    325800-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETIE
COMPUTER: IBM PS/2
                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/U8187756C
Patent No. 5597709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IELEFRX: 201-994-1/44
:NFORMATION FOR SEQ ID NO: 4:
SEGUENCE CHARACTERISTICS:
LENGTH: 217 AMINO ACIDS
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36, 134
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TELEPHONE: 201-994-1700
IELEFAX: 201-994-1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: FERRARO, GREGORY D.
REGISTRATION NUMBER: 36,13
REFERENCE/DOCKET NUMBER: 3
                                                                                                  Unery Match
Best Local Similarity 97.9%
Watches 47, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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                     ; TYPE: PRT
; OKGANISM: homo sapiens
US:09-465-461-1
                                                                                                                                                                                                                                                                                                                                                                                                      PENERAL INFORMATION:
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  LENGIH: 191
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US-09-465-461-1

US-09-465-461-1

Sequence 1, Application US/09455461

Parent No. 6346444

GENERAL INFORMATION:

APPLICANT: (HAPPEL). Scott.

TILLE OF INVENTION: After hematopoletic stem cell transplantation in himse second;

TILLE OF INVENTION: After hematopoletic stem cell transplantation in himses

FILE REFERENCE: CHAPPEL-6.1

CURRENT APPLICATION NUMBER: 60/112,668

PRIOR APPLICATION NUMBER: 60/112,668

PRIOR FILING DATE: 1998-12-17

NUMBER OF SEQ ID NOS: 1

SOFFWARE: Patentin version 3.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                               APPLICANT: Thispen, Anice E. APPLICANT: Thispen, Anice E. APPLICANT: Quaade, Christian APPLICANT: Quaade, Christian APPLICANT: Kruse, Fred Sapplicant: McGarry, Dennis TITLE OF INVENTION: RECOMBINANT EXPRESSION OF PROTEINS FEDMINGER OF SEQUENCES: 79 CORRESPONDENCE AUDHESS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYTPKEOKYSFLQNP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 360;
                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATEMIL Release #1.0, Version #1.36
CURRENT APPLICATION DATA:
APPLICATION NOMBER: US/06/784,562
FILING DATE: CONCURRENTLY Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 98.1%; Score 255; DB 3; I Best Local Similarity 100.0%; Pred. No. 5.4e-29; Matches 48; Conservative 0; Mismatches 9;
                Halban, Philippe A.
No. 6110707mington, Karl D.
Clark, Samuel A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08/589,028
FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37.642
REFERENCE/DOCKEI NUMBER: UTSD:514
TELECOMMUNICATION INFORMATION:
TELEPAX: 512/418-3000
TELEFAX: 512/414-7577
INFORMATION FOR SED ID NO: 73:
                                                                                                                                                                                                                                                                   3: Arrold, White & Durkee
P.C. Box 4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 6C/028,427
FILING DATE: 15-00T-1936
FILING DATE: 15-00T-1936
APPLICATION DATA:
APPLICATION NUMBER: US 68/589,628
Newgard, Christopher B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                         Texas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS
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                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : TOPOLOGY:
US-08-784-582-73
                APPLICAN1:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                STATE: T
COUNTRY:
                                                            APPLICANT:
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Sequence 1, Apply Sequence 2, Apply Sequence 1, Apply Sequence 1, Apply Sequence 1, Apply Sequence 6, Apply Sequence 6, Apply Sequence 6, Apply Sequence 4, Apply Sequence 4, Apply Sequence 6, Apply Sequence 6, Apply Sequence 16, Apply Sequen
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347.945 Willion cell updates/sec
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                                                                                                                                                                                         September 15, 2003, 12:63:35 ; Search time 20.5484 Seconds
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1 MEPTIPLSKLFDNAMLRAHR......ORFHEAYIFKRGKYSFLONP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1: /cgnl2_6/ptocata//Pibpaa/US:7_PigCOMB.pcp:•
2: /cqn2_6/ptocata//Pibpaa/DS:7_PigCOMB.pcp:•
3: /cqn2_6/ptocata//Pibpaa/PS/CARM_PUB_pcp:•
4: /cqn2_6/ptocata//Pibpaa/US67_NRW_PUB_pcp:•
5: /cqn2_6/ptocata//Pibpaa/US67_NRW_PUB.pcp:•
6: /cgn2_6/ptocata//Pibpaa/US67_NRW_PUB.pcp:•
6: /cgn2_6/ptocata//Pibpaa/US67_NRW_PUB.pcp:•
6: /cgn2_6/ptocata//Pibpaa/US68_NRW_PUB.pcp:•
7: /cgn2_6/ptocata//Pibpaa/US68_NRW_PUB.pcp:•
9: /cgn2_6/ptocata//Pibpaa/US68_PUBCOMB.pcp:•
10: /cgn2_6/ptocata//Pibpaa/US69_PUBCOMB.pcp:•
11: /cgn2_6/ptocata//Pibpaa/US69_PUBCOMB.pcp:•
12: /cgn2_6/ptocata//Pibpaa/US69_PUBCOMB.pcp:•
12: /cgn2_6/ptocata//Pibpaa/US69_NRW_PUB.pcp:•
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/cga2_6/prodata/1/pubpaa/US10_NBW_PUB.pcp:*
/cga2_6/ptodata/1/pubpaa/US60_NBW_PUB.pop:*
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/ogn2_6/ptodata/1/pubpaa/0510H_PUBCOMB.pep.*
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GenCere version 5.1.6
Copyright (c) 1993 - 2003 Companen 1881.
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S-10-054-873-7
US-09-984-07-23
US-10-153-27-1
US-10-00-377-2
US-10-153-207-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541936 seqs, 145912426 residues
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                                                                                                                            - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000050000
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Match Length DB
                                                                                                                                                                                                                                                                                                                         US-69-423-100-1
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
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Sequence 12, Appli Sequence 3, Appli Sequence 2, Appli Sequence 11, Appl Sequence 14, Appl Sequence 14, Appli Sequence 3, Appli Sequence 3, Appli Sequence 6, Appli Sequence 19, Appli Sequence 19, Appli Sequence 19, Appli Sequence 19, Appli Sequence 19, Appli Sequence 16, Appli Sequence 16, Appli Sequence 17, Appli Sequence 18, Appli Sequence 16, Appli Sequence 15, Appli Sequence 15, Appli Sequence 15, Appli Sequence 61, Appli Sequence 62, Appli Sequence 62, Appli Sequence 63, Appli	
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# ALIGNMENTS

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Ab. incommission.
APPLICANT: Gan, Zhong Ru
TITLE OF INVENTION: Chimmeric Protein Containing an
Intramolecular Chaperone-Like Seguence
                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
21P: 9411.384
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 18M PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                   NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSE: Townscad and Townsend and Crew LLP
STREFF: Two Exharcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Mycroft, Frank J
REGISTRATION NUMBER: 46,946
REFRENCE/DOCKET NUMBER: 020167-000130US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: WO PCT/CN98/00052
FILING DATE: 31-AMR-11998
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/054,873
FILING DAIE: 22-dai-2002
CLASSIFICATION: «CIRKNOWN»
PRIOR APPLICATION DATA:
                                                  Segmence 1, Application US/19054873
Publication No. US29626164712A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGIH: 49 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IYPE: amino acid
                                                                                                 GENERAL INFORMATION:
APPLICANT: Gan,
                          US-10-054-873-3
RESULT
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Sequence 4, Appli

US-09-969-748C-4 US-09-804-409A-16 US-09-853-688-4

255 249 249 248 242

US-09-929-918-9 US-09-280-030-65 US-09-853-688-2

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US-10-054-873-6
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IITLE OF INVENTION: Chineric Protein Containing an
Intramolecular Chaperone-Like Sequence
                                                                                                                                                                                                  1 MFPIPLSKLFDNAMLRABRLHOLAFDTYGEFERATIPKEGKYSFLOND 40 (11111,1111,11111) 1111 (1111,1111) 1111 (1111,1111) 1 MFPIPLSKLFDNAMLRABRIHOLAFOTYGFFERATIFKEGKYSFLOND 40
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 260; DB 14; Length 49; 100.0%; Pred. No. 5.6c-28; ative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 260: DH 14: Length 92; Pred. No. 1.2e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.5, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/10/054,873 FILING DATE: 22-Jan-2002 CLASSIFICATION: CUNNOWN> PRIOR APPLICATION DATA: WO PCI/CN98/00052 FILING DATE: 3.7-MAR. 1998 APPLICATION NUMBER: WO 90/423,160 FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
CORRESPONDESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Mycroft, Frank J
REGISTRATION NUMBER: 46,946
REFERENCE/DOCKET NUMBER: 020167-000130US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DGS/MS-DGS
                                                    SEQUENCE DESCRIPTION: SEQ ID NO: 1: US-10-054-873-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE DESCRIPTION: SMG ID NC: 2: US-10-054-873-2
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 6. Application US/10054873; Publication No. US20020164712A... GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/10034873
Publication No. US20020164712At
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
STRANDEDNESS: <Unknown>
STRANDEDNESS: <Unk,:Own>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 92 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AITORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ 1D NO: 2
                   TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                 Query Match
Best Local Similarity 100..
These 49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Rest Local Similarity 100.0
Matches 49; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                      RESULT 2
US-10-054-873-2
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US-10-054-873-6
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Gaps
APPLICANT: Gan, Zhong Ru
TITLE OF INVENTION: Chimeric Protein Containing an
Intramolecular Chaperone-Like Sequence
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Intramolecular Chaperone-Like Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 107;
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                                                                                                                                                                                                                       COUNTRY: USA

ZIP: 9411: 2934
COMPUTER: READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1FM FC COMPATIBLE
OPPRATING SYSTEM: PC-DOS/MS-DOS
SCFTWARE: Patentin Release #1.0, Version #1.30
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                                                                                                                            ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Townsend and Townsend and Grew LLF
STREET: Two Embarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Mycroft, Frank J
REGISTRATION NUMBER: 46,946
REFERENCE/FOCKET UMMBER: 020167-000130US
INFORMATION FOR SEO ID NO: 6:
SEGUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106.0%; Score 260; DB 14;
106.0%; Pred. No. 1.4e-27;
live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/CN98/00052
FILING DATE: 31-AMR-1998
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/16/054,873
FILING DATE: 22-Jan-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/054,873
FILING DATE: 22-Jan-2002
CLASSIFICATION: <UNKnown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MGLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM IYPE: Floppy disk
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Publication No. US20020164712A1
GENERAL INFORMATION:
APPLICANT: Gan, Zhong Ru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 107 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: San Francisco
                                                                                                                                                                              CIIY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                           NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                     California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Owery Match
Best Local Similarity 100.0
Matches 49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
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APPLICANT: COX 111, George N
APPLICANT: Bolder Biotechhology, Inc.
TITLE OF INVENTION: Derivatives of Growth Hormone and Related Proteins
FILE REFERENCE: 4152-2-PUS
CURRENT APPLICATION NUMBER: US/10/400,377
CURRENT APPLICATION NUMBER: 08/10/462,941
PRIOR APPLICATION NUMBER: 08/10/462,941
PRIOR APPLICATION NUMBER: 60/052,516
PRIOR FILING DATE: 1997-07-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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        2 FPT1P5SRLFDNAMLRAHRLHQLAFDTYQEFEEAY;PKEQKYSFLQNP 49
                                            | FPTIPLSRLFDNAMLRAHRLHQLAFDTYQRFSEAYIPKSQKYSFLQNF 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPT:PLSRIFUNAMIRAHRLHOLAFDTYQEFEEAYIPKHOKYSFIGNP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0%; Pred. No. 1.3e-26;
Matches 48; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT PRILIGATION NUMBER: US/10/153,207
CURRENT FILLIG DATE: 2002-05-25
CURRENT FILLIG DATE: 2002-05-27
PRIOR PRING DATE: 1955-06-07
PRIOR FILLIGATION NUMBER: 08/190,723
PRIOR FILLIG DATE: 1994-02-02
PRIOR PILLIG DATE: 1994-02-02
PRIOR FILLIG DATE: 1994-03-03
PRIOR FILLIG DATE: 1992-04-13
PRIOR FILLIG DATE: 1992-04-27
                                                                                                                                                                                                                                                                       Sequence 1. Application US/10153207
PUBLICATION US. US2030153003A1
PERRAL INFORMATION:
APPLICANT: James A. Wells
APPLICANT: Brian C. Cunnfligham
APPLICANT: Brian C. Cunnfligham
APPLICANT: GROWTH HORMONE VARIANTS
FILE REFERENCE: 669.12-07-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRICK APPLICATION NUMBER: 07/428,066
PRICK FALINS DATE: 1969-10-26
PRICK APPLICATION NUMBER: 07/264,611
PRICK FILING DATE: 1988-10-26
SUTMARE: FSSLSED for Windows Version 4.0
SEQ ID NO.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Ver. 2.0
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US:10-400-377-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRI
ORGANISM: Homo Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
CS-10-406-377-1
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GENERAL INFORMATION:
GENERAL INFORMATION: DAVID James
TITLE OF INVENTION: RETOMBINANT FUSION PROTEINS TO GROWTH BORRONE
ALICENOS INVENTION: SERUM ALRENIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
ADDRESSEE: FINNEGAN, HENDERSON, FARAROW, GARRETT & DUNNER,
STREET: 1300 I Street, NW
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITI: MACH.

STATE: DC
COUNTRY: USA
ZIP: 20005 3315
ZIP: 20005 3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: EACH TI. Release #1.6, Version #1.30 (EPO)
SOFTWARE: PATENT: Release #1.6, Version #1.30 (EPO)
CURRENT APPLICATION NUMBER: US/09/964,GIO
FILING DATE: 21 M8y-2002
PRIOR APPLICATION NUMBER: US 09/091,873
FILING DATE: 25-UN-1998
APPLICATION NUMBER: US 09/091,873
FILING DATE: 19-DEC-1996
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CERRACTERISTICS:
SOUTH: 191 anite acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *HILL FILLS FER HILL FILL FILLS FILL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0%; Prod. No. 2.10-27;
Matches 49; Conservative 0: Mismatches 0: Indels 0:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEPTIPLSRIEDNAMIRAHRIBGLAFOTYCEFBBAYIPKBOKYSFLONP 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 98.1%; Score 255; DB 11; Length 19;; Best Local Similarity 100.0%; Pred. No. 1.36-24; Matches 48; Conservative 0; Mismatches 0; Indels (
                                APPLICATION NUMBER: WC PCI/CN98/00052
FILING DATE: 31-MAR:1998
APPLICATION NUMBER: WS 69/423,100
FILING DATE: 11-D-C-2000
ATTORNEY/AGENT INFORMATION:
NAME: MYCHOL, Frank J
REGISTRATION NUMBER: 46,946
REFERENCE/COCKET NUMBER: 020167-90013-059
INFORMATION FOR SEQ IT NO: 7:
SEQUENCE CHRRACTERISIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANTI-SENSE: NO SECTENCE DESCRIPTION: SEQ ID NO: 22: US-09-984-010-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: 300 ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 23, Application US/0994010
Publication No. US2003C164578A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGIH: 150 amino acids
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPCLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: 1:near
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GENERAL INFORMATION

APPLICANT: Bato, Seij;
APPLICANT: Bato, Seij;
APPLICANT: Rudo, Toshiyuki
APPLICANT: Rodo, Masaki
TITLE OF INVENTION: DNAS ENCODING NEW FUSION PROTEINS AND PROCESSES FOR
TITLE OF INVENTION: DNAS ENCODING NEW FUSION PROTEINS AND PROCESSES FOR
TITLE OF INVENTION: DNAS ENCODING NEW FUSION PROTEINS AND PROCESSES FOR
TITLE OF INVENTION: DNAS ENCODING NEW FUSION PROTEINS AND PROCESSES FOR
TITLE OF INVENTION: DNAS
FILE REPERBNOE: 382.1026
CCHRENT FILING DATE: 1999-03-26
EARLITH APPLICATION NUMBER: JPIO-87339/1998
EARLITH APPLICATION NUMBER: JPIO-87339/1998
EARLITH APPLICATION NUMBER: JPIO-87339/1998
EARLITH PROTEIN DATE: 1998-03-31
NUMBER OF SEO ID NOS: 66
SOFTWARE PALEMILIN Ver. 2.0
SEO ID NO 66
ENGREE FALENCE AREALT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTHER INFORMATION: Description of Artificial Sequence: Designated is CTHER INFORMATION: an amino acid sequence of MWPsp-MWPmp20-TEV-G-GH US:09-280-030-66
                                                                                                                                  Sequence 5, Application US/05929918
Fracer No US/050000678A1
Fracer No US/050000678A1
Fracer Nordynion Vitaliy A.
APPLICANT: Cordynm, Vitaliy A.
APPLICANT: Chernykh, Svitlana I.
APPLICANT: Stavehenko, Tryna Yu.
APPLICANT: Stavehenko, Tryna Yu.
APPLICANT: Postanov, Oleksandr
TITLE OF INVENTION: PRAGE-DEFENDENT SUPER PRODUCTION OF
TITLE OF INVENTION: BRAGE-DEFENDENT SUPER PROTEIN AND PEPTIDES
CORRENT APPLICATION NUMBER: US/09/929,918
CORRENT FILING DATE: 1999-05-25
FRIOR APPLICATION NUMBER: 05/318,288
FRIOR APPLICATION NUMBER: 05/318,288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 FPTIPLSRIFDNAMIRAHRLHQLAFDTYQEFEBAYIPKEÇKYSFLQNP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 217;
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        24 PPTIPLSRLFUNAMURAHRUHQLAFUTYQBFRBAYIPKEQKYSFLQNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
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100.0%; Pred. No. 1.5e-26;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 255; DB 9; I
Pred. No. 1.7e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.1%; Score 255; DB
ilarity 100.0%; Pred. No. 1.7
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID MOS: 11
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 66, Application US/09280030A Patent No. US20010021515A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Bost Local Similarity 100.(
Matches 48; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Homo sapiens US-09-529-518-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
nes 48; Conserv
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US-09-280-030-66
                                                                                     RESULT 10
T8-69-929-918-9
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Best Local S
Matches 48,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
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                                                                                                                          Sequence 1. Application US/12400739
Sequence 1. Application US/12400739
Publication No. US20030156855A1
GENERAL INFORMATION
APPLICANT: Cox III, George N
TITLE OF INVENTION: Derivatives of Stoxth Hormone and Related Procedure States are Exercent Application Number: US/10/460,708
CURRENT TILING DATE: 2000-03-25
CURRENT FILING DATE: 2000-03-14
PRIOR FILING DATE: 2000-01-14
PRIOR FILING DATE: 1997-07-14
PRIOR FILING DATE: 1997-07-14
NUMBER OF SEQ ID NOS: 41
SOFTWARE: Patentin Ver: 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 FPTIPLSRLFONAMLRAHRLHQLAFDIYQEFFEBAYIPKEGKYSFLQNP 49
| FPTIPLSKLEDKAMIKAHRINGSAEDIVGEEBBAYIPKNOKYSPIGNE 43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 214:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 98.1%; Score 255; DB 12; Best Local Similarity 150.0%; Pred. No. 1.3e·25; Matches 48; Conservative C; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match

98.1%; Score 255; DB 12;
Best Local Similarity 100.0%; Pred. No. 1.5e-26;
Matches 48; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: James A. Wells
APPLICANT: James A. Wells
APPLICANT: Brian C. Conningham
TITLE GE INVENTION: CHOWTH HORMONE VARIANTS
FILE REFERENCE: 669.12-65-67
CURRENT APPLICATION NUMBER: US/10/153,207
CURRENT FILING DATE: 1265-65-22
PRIOR APPLICATION NUMBER: 06/479,864
PRIOR FILING DATE: 1995-66-97
PRIOR FILING DATE: 1995-66-97
PRIOR PELLING DATE: 1995-66-97
PRIOR APPLICATION NUMBER: 07/960,227
PRIOR APPLICATION NUMBER: 07/960,227
PRIOR APPLICATION NUMBER: 07/960,27
PRIOR APPLICATION NUMBER: 07/428,056
PRIOR PELING DATE: 1992-04-27
PRIOR FILING DATE: 1999-10-26
PRIOR FILING DATE: 1999-10-26
PRIOR FILING DATE: 1999-10-28
PRIOR FILING DATE: 1999-10-28
PRIOR FILING DATE: 1999-10-28
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SOFTWARE: FastSEQ for Windows Version 4.9
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       // Sequence 6, Application US/20153207
/ Publication No. US20030153003A1
/ GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: PRT
; CRGANISM: Home sapiens
US-10-406-708-1
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ORGANISM: HOMG Saplens
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US-10-153-207-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: COOPER, DAVID N.
APPLICANT: PROCTER, ANNIE M.
APPLICANT: BRECOFF, ANNIE M.
APPLICANT: GRECORY, JOHN
APPLICANT: MILLAR, DAVID S.
TILLE DE INVENTION: NETHOD FOR DETECTING GROWTH HORMONE VARIATIONS IN TILLE OF INVENTION: NETHOD FOR DETECTING GROWTH HORMONE VARIATIONS IN TILLE DE INVENTION: NUMBER: US/09/853,688
CURRENT FILING DAIE: 201-05-14
NUMBER OF SEC ID NOS: 66
SOFTWARE: PALENTIN VEY: 2.1
EENGIH: 217
                              Sequence 16, Application US/098044C9A
Patent No. US20020155100A1
GENERAL THORMATICAL
APPLICANT: KIEFFER, TIMOTEY J.
APPLICANT: CHEUNG, ANTHONY T.
TILE DF INVENTION: COMPOSITIONS AND METHODS FOR REGULATED PROTEIN
TILE DF INVENTION: EXPRESSION IN GUT
SILE RFERENCE: C29996/027 8721
UNREW: PAPLICANTON NUMBER: US/C9/E04,409A
CURREN: FILING DATE: 2601-09-12
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PALEGALIA Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match 95.4%; Score 248; DB 16; Length 217; Best Local Similarity 97.9%; Pred. No. 1.3e-25; Matches 47; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.1%; Score 242; DB 5; Length 217; 95.8%; Pred. No. 8.6e-25; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 PPTIPLSKLFDNAMLRAHRLHQLAFDTYQEFERAY1PKEQKYSFLQNP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Segmence 4, Application US/09853688 Patent No. US20020081655Al GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 95.8
Matches 46: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRI
OKGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-804-409A-16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 217
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US-09-853-668-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEPLICANT: ANIMARION, IOU. INC.

APPLICANT: ANIMARION, IOU. INC.

APPLICANT: ANIMARY PHARMACEUTICALS, INC.

APPLICANT: HONGTON, IOU. IN.

APPLICANT: HONGTON, IOU. IN.

APPLICANT: HONGTON, STEPPON

APPLICANT: GLANN, Jacqueline, M.

APPLICANT: GLANN, Jacqueline, M.

APPLICANT: GLANN, Jacqueline, M.

APPLICANT: GLANN, Jacqueline, M.

APPLICANT: GLANN, ACCATS:

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TRANSFORT OF BIOLOGICALLY ACTIVE

TITLE OF INVENTION: AGENTS.

TITLE OF INVENTION: AGENTS.

TITLE OF INVENTION: AGENTS.

CURRENT FILING DATE: 2002-12-16

PRIOR APPLICATION NUMBER: US 50/246,819

PRIOR APPLICATION NUMBER: US 50/246,478

PRIOR PLING DATE: 2000-11-14

PRIOR PPLING DATE: 2000-11-0-02
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                                                                                                                                                    APPLICANT: COOPER, DAVID N.
APPLICANT: COOPER, ANNIE N.
APPLICANT: PROCTER, ANNIE N.
APPLICANT: GREGORY, JOHN
APPLICANT: MILLAR, DAVID S.
TITLE OF INVENTION: METHOD S.
TITLE OF INVENTION: METHOD S.
TITLE OF INVENTION: HUMANS, THE VARIATIONS AND THEIR USES
FILE REPERSENCE: WAN G.
CURRENT APPLICATION NUMBER: US/05/853,688
CURRENT APPLICATION NUMBER: US/05/853,688
CURRENT OB TELL NOS: 66
SOFTWARE, PALENTIN VOY: 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 FPTIPLSRIEDMASERAHRLEGGAFOTYGEFBBAYIPKSTYNFICHE 74
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 FPTIPISRAFDNAMARABHLHQLAFDIYQEFBHAYIPKBUKYSFLONF
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                                       : Sequence 2, Application US/09£53688 : Patent No. US20020081605A1 : GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 115
SOFTWARE: Patentin version 3.3
SEQ ID NO 2.25
JENGTH: 217
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Matches 47; Conservative
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ORGANISM: Homo sapiens
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CS-09-823-688-2
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Copyright (c) 1993 - 2003 Compagen Ltd.
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using sw model OM protein - protein search, Septembor 15, 2003, 11:56:45; Search time 8:07885 Serondos (Without alignments) 583.284 Million cell updates/sec Run on:

Title: Perfect score:

.....OBFERAYIPKRUKYSFLONF 49 US-69-423-100-1 260 1 MEPTIPLSRLFDNAMLRAHR..... sedneuce:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283338 seqs, 96158682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match (30% Maximum Match (30% Listina first 45 summaries

PTR\_76:\* 1: pirl:\* 2: pir2:\* 3: pir3:\* 4: pir4:\* Database

Pred. No. is the number of results predicted by charce to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result		e Ouery	% Ouery			
Sc	Score	Match		33	63	Description
	255	98.1	21.7	-	STHU	somatotropic 1 pro
	255	98.3	2:7	7	:67410	somatotropic - rho
	228	87.7	2:7	ч	STHUV	somatotropin 2 pre
	228	-	256	. 1	STHUV2	somatotropic 2 pre-
	213	81.9	212	~	157408	Mar.
	213	ä	217	7	153267	chorionic somatoma
	205	73.8	217	7	I67411	scmatotropin - :he
	203	77.3	217	~	167409	chorionic somatoma
	197	75.8	215	(7	A26449	choriomammotropin
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	197	75.8	217	~	E32435	chorichammetrepin
15	11.5	62.1	216	~	STAS	somatotropin precu
16	50.5	62.7	190	7	PN0140	
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<u>.,</u>	6.6		061	~1	350429	somatetropin - Arr
-	59.5	_:	216	_	STRI	Somatatropin pre:
1.5	39.5	61.3	216	_	STPG	Sometetropia prec.
٠٦ د ۲	56.5	61.3	216	(1)	146145	
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ert	59.5	51.3		Ŋ	JC4632	socatotrof : precs
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13	55.5	8.68		_	A£1584	::
	150	57.7		174	JC1514	5.
	148	56.9		7	A50625	somatotropin - 910
	146	56.2	:63	?	JNC387	soratotropin - sei
	144	55.4	061	(4	\$21750	Sometofropin Fus
	144	55.4	216	7	A60509	somatotropin precu

somatotropin precu	somatotropin precu	somatotropin precu	somatotropin - dom	somatotropin precu	somatotropin - bul	somatotropin - bul	scmatctropin - bow	somatotropin precu	choriemammetropin-	somatotropin - blu	EST/beta-Gal mutan	growth hormone - g	growth hormone II	growth hormone I p	somatotropin precu
STBC	STSH	STGT	S32682	804929	A56316	151188	151250	JS0037	B32435	A60623	167761	151114	869263	S69262	S02764
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717	2:7	717	573	2:6	067	215	195	215	199	183	8.3	200	210	210	210
54.8	54.8	54.8	54.8	53.8	50.8	50.8	49.2	49.2	46.9	44.5	37.3	37.3	10 ° 10 ° 10 ° 10 ° 10 ° 10 ° 10 ° 10 °	33.5	33.5
142.5	142.5	142.5	142.5	140	132	132	126	128	122	11.6	98.5	65	r,	6.7	97
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# ALIGNMENTS

ABSULT: STRU STRU STRU STRUCTORION   Precursor (validated) - human STRUCTORION   Providence   Providence   Page   Page   Page   Page   Nothernate arouth hormone   Page   Page   Page   Page   Page   Nothernatis: structh hormone   Page   Page	Control of the Same Section (March 1998) # text_change 08-Dec-2000 Section 10-Peb-1995 #text_change 08-Dec-2000 Section: A93731; A32435; A9364; A94247; A90051; A93397; A93778; A91764; A90217 Filterook F.M.; Morek D.D.; Soodman, H.M. Nork D.D.; A37643730 H.M.	National Artistic: Human, growth, bormone DNA Sequence and mRNA structure: possible alternative Afficie: Human, growth, bormone DNA Sequence and mRNA structure: possible alternative Affecession: A93731, NUID:82014939, PMID:6269091	A:Moleculo type: DNA A:Residucs: 1-217 <dbn> A:Residucs: 1-217 <dbn> A:Cross-references: GB:V00520 A:Notc: the 20K short form sometotropin lacks residues 58-72 (32-46 in the active h R:Chen, E.Y.: Liao, Y.C.: Smith, D.H.: Barrera-Saldana, H.A.: Gelinas, R.E.: Seebur</dbn></dbn>	<pre>Cenomics 4, 479-497, 1989 A;Itle: The human growth hormone locus: nucleotide sequence, biology, and evolutio A;Reference number: A32435; MUID:89307277; PMID:2744760 A;Associon, A32735</pre>	A. Wolsenie vy Franka A. Wolsenie vy Franka A. Residues: 1-217 cCHE> A.Cross-relerances: GB:3003071; NID:9183148; PIDN:AAA52549.1; PID:9183149	R.Roskam, W.: Rougeon, F.  Nucleic Acids Res. 7, 305-320, 1979 A.Thile: Wisherd and nucleotide sequence of the human growth hormone stru A.Ritze: Wishermer imper: A93694; MUID:80034477; PMID:386281	Ajmicession: Assosy Ajmolecule type: mRNA Ajresidesi-1-217 (205) Ajresidesi-1-005, 9	Associate the concession of the control of the cont	A:Woleculo type: mRNA A:Residues: 1-217 <naka. 133,="" 1969="" 490648;="" 73-91.="" a:reterence="" a:title:="" arch.="" biochem.="" biophys.="" c.h.:="" dixon,="" growth="" hormone.="" human="" j.s.:="" liu.="" milli:69289202;="" number:="" of="" pituitary="" pmid:5810834<="" primary="" r:l1,="" structure="" th="" the="" w.k.="" xix.=""><th>Fib. C.H.: Dischem. Biophys. 146, 233-236, 197] Arti. Eischem. Biophys. 146, 233-236, 197] Arti.le: Human pituriary growth hormone. XXXII. The primary structure of the hormon A: Reference number: A50651: MUID:72143935; PMID:5144027 Arcession: A90651 Arolecule type: protein</th></naka.>	Fib. C.H.: Dischem. Biophys. 146, 233-236, 197] Arti. Eischem. Biophys. 146, 233-236, 197] Arti.le: Human pituriary growth hormone. XXXII. The primary structure of the hormon A: Reference number: A50651: MUID:72143935; PMID:5144027 Arcession: A90651 Arolecule type: protein
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scmatotropin 2 precursor - human 2, growth hormone variant, hGii-V; placental somato Nichternates agrowth hormone 2; growth hormone variant, hGii-V; placental somatotropin. 2, long splice form; somatotropin 2, short splice form CiSpecies: Homo sapiens (man) (CiSpecies: Homo sapiens (man) 8 ** sequence_revision 10-Feb-1995 ** text_change 21-Jul-200C CiAccession: D32435; B28072; A01511; IS2104; A60711 R;Chen, E.Y; Liao, Y.C.; Smith, D.H.; Barrera-Saldana, H.A.; Gelinas, R.E.; Seeburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NiAlternale names: growth hormone (Species: Macaca mulatta (Thesus macaque) (Species: Macaca mulatta (Thesus macaque) (C.Species: Macaca mulatta (Thesus macaque) (C.Species: 13. May-1996 #text_change 16-Jul-1999 (C.Saccession: 167410; A05094 (M.) Fisher, J.M.; Fowler, P.D. (M.) Fowler, P.D. (M.) Fisher, J.M.; Fowler, P.D. (M.) May-152, 1993 (M.) May-1996 (M.) May-1
in somatotrophic cells
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                                                                                                                                                                                                                                   AMAP position: 17q23.1-17q23.2
A: Introns: 4/1: 57/3: 97/3: 152/3
B: Internative spiriting; hormone: pituitary
E: Internative spiriting; hormone experimental csoloring: 1.26/3: 50/2-roduct; sometotropin 1, long form *status experimental csoloring: 1.26/3: 50/2-roduct; growth hormone 5k peptide #status experimental csoloring: 1.27-57,73-217/Product; sometotropin 1, short form *status experimental csoloring: 1.29-191,208-215/Disulfide bonds: *status experimental
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A.Mesidues: 1-217 <RESS.
A.Cross-references: GB-L16586; NID:9293114; PIDN:AA18842.1; PID:9293115
R.Li. C.H.: Chung, D.: Lahm, H.W.; Stein, S.
Arch, Biochem, Biopiys, 245, 287-291, 1986
A.Tille: The primary structure of monkey piunitary growth hormone.
A.Reference number: A05094; MUID:86129460; PMID:3080959
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 255; DB 1; Length 217;
Pred. No. 2e-24;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6; Indels
     Thiomhed: The gone for this hormone is transcribed only i
Promment: About 90% of somatotropin is the 22% long form.
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AlReference number: A447/4
AlContents: annotation; identification of source organism
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100.0%; Pred. No. 2e-24;
iive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sore 255; DB 98.1%; Score 255; DB Best Local Similarity 100.0%; Pred. No. 2e-Matches 48; Conservative 0; Mismatches
                                                                                                                                           A:Gene: GDB:GH1
A:Cross-references: GDB:119982; OMIM:139250
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Sest Local Similarity
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                                                                                                            Conetics:
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167410
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A.Rolecule type: protein
B.Rolecule type: protein
A.Rolecule type: protein demain of its receptor: protein
A.Rolecule: annotation: X-ray crystallography, 2.8 amstroms
A.Rolecule: the structure of the complex with growth hormone receptor is described
B.Gray, G.L., Baldridge, J.S.; McKcown, K.S.; Seyneker, H.L.; Chang, C.N.
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A;Reference number: I41126; MUID:86137393; PMID:3912261
A;Accession: I84549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in Productin and Carcinogenesis, Proc. Fourth Tenevis Workshop Productin, Griffiths, K., A;Title: The chemistry of the human lactogenic hormones.

A;Reference number: A4427

A;Contents: annotation; somatotropin revisio;

B;Bewley, T.A.; Dixon, J.S.; Li, C.H.

R;Bewley, T.A.; Dixon, J.S.; Li, C.H.

A;Title: Sequence comparison of human pituitary growth hormone, human choricule somatons

A;Reference number: A91764; MJID:7309228; PMID:4675454
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                                                                                                                                                                                                                                                                                                 A;Molecule type: protein
A;Residues: 27-51 kNIA>
R;Niall, H.D.; Hogau, M.L.; Sauer, R.; Rosenblum, 1.Y.; Greenwood, E.C.
Proc. Natl. Acad. Sci. U.S.A. 68, 856-869, 1971
A;Itle: Seguences of pituitary and placental lactuachic and grewin hermones: evolution
A;Reference number: A53778; MUID:71153968; PMID:5279524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A Molecule type: protein.
A/Realdues: 27-217 CREW.
A/Realdues: 27-217 CREW.
B/Covis. U.J.: Bonewald.
Biochem. Biophys. Res. Commun. 92, 511-516, 1960.
A/Title: The 20,000-dalton wariart, of human growt: hormone: location of the amine acid.
A/Reference number: A902.7: MCID: 80101-80130196, FMID: 7355479
A/Contents: somatogropin, 20K short variant.
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A,Rosidues: 46.571,73.80 (LEW)
R, Rosidues: 46.571,73.80 (LEW)
B, Chapman G, C. E.; Regers, K. M.; Brittain, T.; Bradshaw, R. A.; Pates, C. J.; T.; Dev. C. G.
B, Bool. Chem. 256, 2395-2401, 1981
A, Title: The 20,006 molecular weight variant of human growth hormone. Preparation and s A; Reference number: A92311; MUTD: 6117361; PMID: 7462247
A; Contents: somatotropin, 20K short variant
A; Accession: A92311
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A,Reference number: A61466
A,Recession: A61466
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A;Molecult type: mRNA
A;Residues: 1-26 <RES>
A;Cross-references: GB:M14398; NID;g183158; PIDN:AAA5255411; PiD:g183159
                                                                                                                                           A;Title: Revised primary structure for human growth bounded. A;Reference number: A3387; KUID 71138765; PMID:5279046. A;Accession: A93397.
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A.Residues: 27-57;73-79 <CHA>
R.Singh, R.M.P.: Seavey, B.K.: Lewis, L.J.: Lewis, C.J.
J. Protein Chem. 2, 425-435, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Accession: A93778
A;Molecule Lype: protein
A;Residucs: 119-120;157-159 <N12>
R;Niall, H.D.
A:Residues: 27-94;96-217 <110>
R:Niall, H.D.
Nature New Biol. 230, 90-91, 197.
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Accession: 157408
Riccies, T.G.; Durning, M.; Fisher, J.M.; Fowier, P.D.
Endoics: T.G.; Durning, M.; Fisher, J.M.; Fowier, P.D.
Endoicrisology 133, 1744-1752, 1993
A.Fitie: Cioning of Iour growth hormone/chorionic somatomammotropin-related complem A.Fitie: Cioning of Iour growth hormone/chorionic somatomamotropin-related complem A.Fities: Cioning of Iour growth hormone/chorionic somatomamotropin-related complem A.Fities: 157408
A.Fities: Terliminary: translated from GB/EMBL/DDBJ
A.Fities: 1-212 cRES>
A.Fities: 1-212 cRES>
A.Fities: Terliminary: 
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Endocrinology 133, 1744-1752, 1993
A/Jitle: Cloning of four growth hormone/chorious somatomammotropin-related complem A.Reference number: 153267; MJID:94008724; PMID:8404617
A.Reference number: 153267
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TiSpecios: Manaca mulatta (rhesus macaque)
CiDato: 31-May-1996 #sequenco_revision 31-May-1996 #text_change 16-Jul-1999
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C:Species: Macaca mulatta (rhesus macaque)
C:Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 16-Jul-1999
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C:Superfamily: prolactin
                                     A) Molecule type: mRNA
A) Residues: 1.256 <CON>
A) Notice an alternative splice junction for intron 4 is used
A) Notice an alternative splice junction for intron 4 is used
C) Genetics:
A) Gene: GDB:GH2
A) Genes: GDB:H19983; OMIM:H39240
A) Conservete and C) 57/3: 97/3: 152/3
A) Throns: 4/1; 57/3: 97/3: 152/3
A) Throns: 4/1; 57/3: 97/3: 152/3
A) Throns: 4/1; 57/3: 97/3: 152/3
C) Superfamily: prolaction
C) Repure and Product and Producted CNAT>
E:17-26/Doublain: Signal sequence #status predicted CNAT>
E:27-256/Product: somatotropin 2 splice form 2 #status predicted CNAT>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 PTIPLSRLFDNAMLRAHKLHQLAFDTYQEFEEAYIPKSGKYSFLONP 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oucry Match 87.7%; Score 22%; DB 1: Length 256; Best Local Similarity 91.7%; Pred. No. 5.6e-21; Matches 44; Conservative 2; Mismatches 2; Indels
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Best Local Similarity 78.7
Matches 37, Conservative
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Matches 37; Conservative
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A; Residues: 1-217 <RES>
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     A;Accession: A28072
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A. Residues: 1-217 (160)

A. Cross-references: 68.038451; NiDig183179; PIDNIAAA33891.1; PIDNIAAA386.1; R. Frankenne. E.; Scippo, M.L.; Van Beenmen, d.; 1990

A. Title: identification of placental human growth hormone as the growth formanner a hadecession: A6071; MUD1:90317018; PMID:2186278

A. Accession: A6071; MUD1:90317018; PMID:2186278

A. Accession: A6071; MUD1:90317018; PMID:2186278

A. Residues: 27-44.46-57 cFRA.

A. Mode: partial glycosylation was demonstrated by lection binding

C. Comment: This gene is expressed by the placenta.

A. Gene: OBB-GH.

A. Map position: 17422-17624

A. Map position: 17422-17624

A. Marchael alternative splicing: glycoprotein; hormone: placental

C. Superfamily: product: somatotropin 2, long splice form *status predicted cSrI.

F. 27-217/Product: somatotropin 2, short splice form *status predicted

F. 27-57, 37-317/Product: somatotropin 2, short splice form *status predicted

F. 17-57, 37-317/Product: carbohydrate (Asn) (covalent) *status predicted
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STHUVZ
STHUVZ
SOMETOTEORIES: GEOUFFOR, SPINCE form 2 - human
N.Alternate names: growth hormone variant 2: placental sometoticpic form 2
N.Alternate names: growth hormone variant 2: placental sometoticpic form
N.Alternate names: growth hormone variant 2: placental sometoticpic form
C.Species: Boom Sapiens (man)
C.Species: Boom Sapiens (man)
C.Species: George 02: placental form
C.Species: Boom 25, 9601-9066, 1388
A:Title: Two distinct species of human growth hormone variant mRNA in the human placental
A:Reference number: A92725: MUID:88243759; PMID:3379657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A.Mebarg, P. ii.

BNA 1, 239-246, 1982
A.Title: The human growth hormore gone family: nucleotide sequences show proving chapter. A.Meference number: A01511: MOLD: #3182015; PMID:7169069
A.Reference number: A01511: MOLD: #3182015; PMID:7169069
A.Reference number: A01511
A.Melecule type: DNA
A.Residues: 1-34, PV, 36-217 (SEE)
B.Hgout, A. Scippo, M.L.: Frackence, F.; Hennen, B.
A.Tch. Int. Physiol. Blocking, 95, 63-67, 1993
A.Tch. Int. Physiol. Blocking Sequence of pacental ham an annotation and molnetide sequence of pacental ham an annotation and molnetide sequence of pacental ham as a facession: 152104; MUID:#9024984; FXID:2460050
A.Reference number: 152104; MUID:#9024984; FXID:2460050
A.Recession: 152104
                               Affile: The human growth normore locus: nucleotide sequence, biolocy, and evolution. A.Reference number: A.2435, M.HD:89307277; PMID:2744760
A.Rocession: D32435
A.Rocession: D32435
A.Roceule type: DNA
A.Residues: 1-217 < CBE>
A.CHOS TREFERENCES: GBS A.CHOS T. NID:9183146; PIDN:AAA52552 I: PIB:9183152
A.CHOSS TREFERENCES: GBS A.CHOS T. NID:9183146; PIDN:AAA52552 I: PIB:9183152
B.COOK, N.E.; Ray, J.; Emery, J.G.; Excellence: S.A.
J. Biol. Chom. 268, 9020-9036, 1988
A.Title: Two distinct species of human qrowth hormore-variant mRNA in the human placence A.Recension: B28072
A.Recession: B28072
A.Molecule type: mRNA
A.Residues: 1-217 < COO>
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Genomics 4, 479-497, 1989
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RESULT 4

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A:Molecule type: mRNA
A:Residues: 1-217 <GOO>
R:Tanaka, M.: Masuda, N.: Watahiki, M.: Yamakawa, M.: Shimizu, K.: Nagai, J.: Nakas
B:Tohem. Int. 16, 287-292, 1988
B:Orlem. Int. 16, 287-292, 1988
A:Thie: cDNA cioning of human chorionic somatomammotropin-1 mRNA whose transcription. A:Reference number: 152342; MUID:88209096; PMID:2835050
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A; Molacule type: protein
A; Residues: 27-217 <NIA>
A; Residues: 27-217 <NIA>
A; Experimental source: placenta
R; Mr. A Bhaird, M.; Tipton, K.F.
B; Mr. A Bhaird, M.; Tipton, K.F.
B; Mr. A Bhaird, M.; 1991
A; Title: Catechol-O-methyltransferase from human placenta: purification and some pro
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A:Gestdues: 1-3 < TAN>
A:Cross_treferences: 08:M35419; NID:g506822
A:Scherwood, L.M.; Burstein, Y.; Schechter, 1.
Proc. Natl Acad Sci. U.S.A. 76, 3819-3823, 1979
A:Fittle: Primary structure of the NH-2-terminal extra piece of the precursor to hum.
A:Reference number: A93833; MUID:80034970; PMID:291043
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A: Accession: A93192
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in Prolactin and Carcinogenesis, Proc. Fourth Tenovus Workshop Prolactin, Griffiths
Affitle: The chemistry of the human lactogenic hormones.
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F:Goodman, H.M.; DeNoto, F.; Fiddes, J.C.; Hallowcll, R.A.; Page, G.S.; Salth, S
in Mobilization and Reassembly of Genetic Information, Scott, W.A., Werner, R.,
A:Reference number: A94422
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Akrasidues: 1,3-26 (SHE)
Akrasidues: 1,3-26 (SHE)
Akrasidues: 1,3-26 (SHE)
Akrasidues: 2,5 (Seeburg: P.H.: Martial, J.A.; Baxter, J.D.; Goodman, H.M.
Nature 270, 494-499, 1977
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Assertation 1971 - SHI>
As Experimental source: plucenta
R.Li, C.E., Dixon, O.S.; Chung, D.
Arch. Biochem. Blophys. 155, 95-110, 1973
Arch. Electem. Blophys. 155, 95-110, 1973
Asterence number: A90054; MJID:73201971; PMID:4712450
Asterence number: A90054; MJID:73201971; PMID:4712450
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                                                                                                                                                                                                                                                           1:1 HIHH: H:H:H:H:H:HHH H:HHH: HIHH:HHHH: : 29 TVPLSRLFD:HAKLQAHRAHQLAIDTYQBEBETYIPKOGKYSFLHD 73
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Pred. NO. 3.40
): Mismatches
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A:Status: translated from GB/EMBL/DDBJ
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AfResidenes: 27-217 CLC>
AtExperimental source: placenta
Rivall, H.D.
iccal Similarity 80.09
es 36: Conservative
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A:Fesidues: 1-217 <CHE>
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                                                    Matches
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                                                                                                                                                                                                                                Sonatotropin - rhosus maraque
N.Alternate names: growth horoses
N.Alternate names: growth horoses
N.Alternate names: growth horoses
C.Species: Macaca malatta (rhesus macaque)
C.Species: Macaca malatta (rhesus macaque)
C.Species: May-1996 Magential (rhesus macaca)
C.Accession: 16741
Endocripciology 133, 1744-1752, 1933
A.Title: Cloning of four growth horone/chorionin scantomarmotraphs of lated overpremental Armefaces number: 153267; MJD:94009724; PMID:9404617
A.Accession: 16741
A.Status: proliminary, translated from GB/DMBL/DDSC
A.Status: proliminary, translated from GB/DMBL/DDSC
A.Status: 217 cRES
A.Scossreferences: GB:L16555; MID:9293116; PIDN:AAA2G180.1; PID:9293117
C.Superfamily: prolacin
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Cispedies: Macaca mulatia (rhosus macaque)
Cispedies: Macaca mulatia (rhosus macaque)
Cipate: 31-May-1996 #sequence_revision 31-May-1996 #text_change [F-Jui-1999
Cipacession: 167409
Richors, T.G.: Durning, M.: Fisher, J.M.; Fowler, F.D.
Bidocrinology 133, 2744-1752, 1993
A:Reference number: 153267, MUID:94008724; PMID:8404617
A:Reference number: 153267; MUID:94008724; PMID:8404617
A:Reference number: 153267; MUID:94008724; PMID:8404617
A:Reference number: 153267; MUID:94008724; PMID:8404617
A:Resdues: preliminary; translated from GA/EMBL/DDBJ
A:Resdues: Cipaci mRNA
A:Resdues: 1-227 cRESA
A:Resdues: Cipaci mRNA
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C)Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #sequence_revision 30-Jun-1988 #sequence_revision 30-Jun-1988 #sequence_revision 30-Jun-1988 #sequence_revision A5449
C)Accession: A5449
BRHitt, H.; Kimehman, J.; Birnhaum, M.C.; Chen, B.Y.; Sceburg, P.H.; EBgihandt, M.L.; Bullitle: The human growth hormone gene locus: structure, evolution, and allein variation A.Recession: A26449 MUID 87161235; PMID:3030680
A.Molecule type: DNA
A.Molecule type: DNA
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Csuperfamily: protactive protactive contacts contacts contacts protactive contacts protactive contacts protacts contacts co
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8: Mismatches 4
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79.28;
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Accession: B2991

R.Linzer, D.1.H.: Tolamattes, F.

R.Linzer, Cohen. 260, 9574-9579, 1995
A.Tittle: Monlectide Sequence of mouse prolactin and growth hormone mRNAs and expression: B2991
A.Reference number: A92548, MJID:85261358, PMID:2991252
A.Accession: B2991
A.Molecule type: mRNA
A.References: GB:X02891; GB:K03232; NID:951067; PIDN:CAA26650.1; PID:951068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N:Alternate names: growth hormone
C:Species: Balaencptera borealis (sei whale)
C:Date: 07-May-1993 #sequence_revision 07-Way-1993 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C.Species Mus rusculus (house mouse)
C.Date: 36.Sep-1987 #sequence_revision 30.Sep-1987 #text_change 28-May-1999
A; Molecule type: DNA
A; Residues: 1.217 <CHE>
A; Residues: 1.217 <CHE>
A; Cross-references: GB:J03071; NID:g183148; PIDN:AAA52553.1; PID:g183153
C; Genetics:
A; Gene: GB:CSR2
A; Gene: GB:CSR2
A; Gene: GB:CSR2
A; Gene: GB:T19813; OMIM:118820
A; Map position: 17q22-17q24
C; Supertamily: prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 190;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 TIPLSRIFDNAMIRAHKCHQLAFDTYQEFEEAYIPKEQKYSFLQN 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29 TVPLSRLFDHAMLQAHRAHQLAIDIYQEFSETYIPKDQKYSFLHD 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 FPTIPLSRLEDNAMLRAHRLHQLAFDTYQEFERAYIPKEQKYSFLQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Finder, N.A.; Pankov, Y.A.; Bulatov, A.A.; Osipova, T.A. Biokhimia 47, 1059-1069, 1982
Affille: Amino acid sequence of sciwhale somatotropin.
A/Reference number: PNO140; MUID:83000569; PMID:7115813
A/Accession: PN0140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C.Superfamily, prolactin
C.Rewords, anterior plutitary, growth factor, hormone
FEL-25/Exomain, signal sequence #status predicted <SIG>
F127-216/Product; somatotropin #status predicted <SIN>
F178-189.266-214/Dismitide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 160.5; DB 2;
Pred. No. 1.1e-12;
6; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62.1%; Score 161.5; DB 1
itarity 68.1%; Pred. No. 9.4e-13;
Conservative 5; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                         75.8%; Score 197; DB 2;
80.0%; Pred. No. 3.5e-17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A:Note: article in Russian with English abstract
C:Superfamily: prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61.78;
68.18;
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Hest Local Similarity 80.0%
Marches 36, Conservative
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Best Local Similarity 68.1
Matches 32, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 32; Conserve
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A;Residues: 1-190 <YUD>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Superfamily: prolactin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     somatofropin precursor
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                                                                                                                                                       A,Note: choriomammotropin apparently copuritied with placental catechel-o-methyllransres Ribberwood, L.M.; Handworger, S.; McLaurin, W.D.; Lammer, M. Nature New Joil, 233, 59-61, 197.

A,Title: Aminoracid sequence of human placental lactoque.
A,Reference number: A93401; NUID-72016313; PMID:5286363
A,Contents: amicoration
R; Sherwood, L.M.; Handwerger, S.; McLaurin, W.D.; Lanner, M. Nature New Biol, 235, 64, 1972
A,Reference number: A93405
A,Reference number: A93405
A,Reference number: A93405
A,Reference number: A92251; MJD-79173681; PMIL-338159
A,Contents: amnotation of the interchalm disulfide bends of arrester human piscental and A; Reference number: A92251; MJD-79173681; PMIL-338159
A,Contents: amnotation of the interchalm disulfide bends of arrester human piscental and A; Batta, A, Baxter, JD-19811; G.L.; Eberhardt, N.L.
J, Balol, Chem. 259, 1313-13138, 1984
A,Title: Analysis of a rajor human checklonic sematementopin good, Evidence for two 19 A, A, A, Chan, Les A, Baxter, JD-19810, A, A, A, Chan, Chem. 259, 1313-13138, 1984
A, Mille: Analysis of a rajor human checklonic sematementopin good, Evidence for two 19 A, A, A, Chan, Chem. 259, 1313-13138.
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S.C.Accession: E324435
S.C.Accession: E324435
S.C.Accession: E324435
S.C.Accession: E324435
A.Title: The human growth hormore locus: nucleotide sequence, picicity, and evolution. A:Reference number: A32435; MUIC: 89307277; PMID:2744760
A.Accession: B324435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A) Status: translated from GB/EM %L/DCBU
A,Molecule type: DNA
A/Residues: 1-21 <RESA
A/Cross-references: GB:K02401: NID:g181120: PIDN:AAA52115.1; PID:g181121
A/Cross-references: GB:K02401: NID:g181120: PIDN:AAA52115.1; PID:g181121
B/Seeburg, P.H.; Shine, J.; Marital, J.A.; Ulirich, A.; Goodman, H.
A/Ritle: Nucleotide Sequence of a human gene coding for a polypeptide hormon.
A/Reference numbor: IS9658: MOJD:78165787; PMID:611657
A/Accession: IS9658
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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A;Introns: 4/1; 57/3: 97/3: 152/4
C;Superfamily: prolaction
C;Keywords: hormone; placenta
F;1-26/Domain: signal segmence #status experimental <STG>F;27-217/Product: cboricmammotropin A #status experimental <MATE
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A;Reference number: A61283; MUID:91244006; PMID:2037148
A;Accession: A61283
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A:Accession: 155229
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Pred. No. 3.5e-17;
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80.0%;
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                                                                                    A; Molecule type: protein
A; Residues: 27-46 <NIC>
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Best Local Similarity
Matches 36, Conserv
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1 FPAAMPLSSLEANAVLRAOHLHQLAADIYKEFBRAYIPEGGRYS-10N 46
2 FPITPLSKLFUNAMDRAHRDHQDAFDIYQEFEBAYIPKBQKYSFUQN 48
                                                                         September 15, 2003, 12:04:18
                                                                                         9.07885 sers
                                                                         Search completed:
Job time : 9.07885
    7
                                                                    Sometouropin - Atrican elephant
N.Altornate names growth hormone
C.Species. Loxodonta africana (African elephant)
C.Date: 03-May-1592 Beginence (African elephant)
C.Date: 03-May-1592 Beginence (African (African elephant)
C.Accession: JK0219
R.Mulmost J.D.: Niedel M.C.: Li, C.H.: Park Y.C.H.
Int. J. Pept. Protein Res. 33, 346-372, 783
A.Title: Primary structure of eliphant growth hormine.
A.Reference namber: JR0219
A.Reference organise: JR0219
A.Resion: JK0219
A.Resion: JK0219
A.Resion: JK0219
A.Resion: JK0219
A.Resioner all source: pituitary gland
C.Superiamily: prolactin
E.1-190/Product: somatotropin *status experimental CMAT>
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llarity 68.1%; Pred. No. 1.4e-12;
Conservative 6; Mismatches 8; Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61.3%; Score 159.5; DB is Length 190;
ilarity 68.1%; Pred. No. 1.4e-12;
Conservative 6; Mismatches 8: Indels 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 PPTIPLSRLFDNAMLRAHRLHQLAFOTYQEFEEAYIPKEGKYSFLQN 48
   1 FPAMPLSSLFANAVLRACHLHBLAADIYXBEFRAYLEEDONY-FLON 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 32, Conserva
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Best Local Similarity
Matches 32, Conserva
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OM protein - protein search, using sw model

September 15, 2003, Il:54:00 : Search time 4.56631 Seconds Run of:

(withour alignments) 504.633 Million cell apdates/sec

08-09-423-100-1 Title: Perfect score:

MEPTIPLSKIFDNAMMRAHR......QRFEENYIPKEGKYSFLONP 49 260 Seguence:

BLOSHM62 Gapop 10.0 / Gapext, 0.5 Scoring table:

127863 seqs, 47026705 residues

Searched:

127863 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 20000000 Minimum DB Maximum DB

summaries Post-processing: Minimum Natch (% Maximum Match 100% USELing first 45 sc

SwissPrct\_41:\* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

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# ALIGNMENTS

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SOMA_HUMAK STANDARD: PRT: 217 AA.
P01242: 014405; 016631; 09HBZ1; 09UNJ7; 09UNL5;
21-UJL:1986 (Rel. 01, Greated)
11-NAR-1992 (Rel. 21, Last sequence update)
15-SFP-2003 (Rel. 42, Last andiation update)
Schartotropin procursor (Growth hormone) (GH:N) (Pituitary growth hormone) (Growth hormone).
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Human growth promone DNA sequence and mRNA structure; possible alternative solicing.
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Kammaila; Butheria; Primates, Catarrhini; Hominidao, Homo.
NCBI_TaxID-9606;
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MEDIINE-83182010: PubMed=7169009;
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MEDLINE-81117361: PubMed=7462247:
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MEDLINE*20402571; PubMed*10341946;
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MEDLINE-80130196; Pubmed=7356479;
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                    SEQUENCE FROM N.A. (ISOFCRM 4)
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SEQUENCE OF 27-217.
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Cohen F.E., Kuntz I.D.;
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                                                                                                                                                                                                                 Somatotropin precursor (Srcwth hormone) (GH) (GH-N) (Piturtary growth
                                        Saps
                                                                                                                                                                                                                                                                                                                                                       Golos T.G.: Durning M., Fisher J.M., Fowler P.D.: "Cloning of four growth hormone/chorious some complementary deoxyriborucleic acids differentially expressed during pregnancy in the rhesus monkey placenta."; Endocrinology 133:1744-1752(1993).
                                                                                                                                                                                                                                                                   Fukaryota, Metazoa, Chordată, Craciala, Vertebrafa, Butelessiumi,
Mammalia: Euforia, Primates, Catarrhizi, Orreopithecidae,
Cercepilhecidae, Macaca,
NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE SOMATCTROPIN/PROLACTIN FAMILY.
                                                                             27 FPTIPLSKLFDNAMERAHRLHQLAFOTYQFFEEAYIPKEQKYSFLQNP 74
             DB 1; Length 217;
                                                              2 FPTIPLSRLFONAMLRAHRIHGIAFDTYQHFEERAYIPKEOKYSPLQNP
                                      0: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                > D (IN REF. 2).
2C5180341EEC4600 GRU64:
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BY SIMILARITY.
BY SIMILARITY.
E -> Q (IN REF. 2).
N > D (IN REF. 2).
             Score 255; 58 1; 1
Pred. No. 6.6e 25;
                                                                                                                                                                          01-00T-1993 (Mc), 27, Created)
01-00T-1994 (Mel. 3C, Tast sequence update)
28-FEB-2003 (Mel. 41, Last angotation update)
                                                                                                                                                     217 88
                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam. PF00103, hormone, i. PR02TTE, P800266, SOMA-CTR0.IN-1: 1. PROSTTE: PS00348; SOMA-CTR0.IN-2: 1. Hormone; Pituitary; Signal.
                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR001409; Sumatouropin.
                                                                                                                                                                                                                                                                                                                                            MEDLINE-94008724; Pubmed-8464617;
                                                                                                                                                                                                                                                       Macaca mulatta (Rhesus macague).
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                          100.08:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; L16556; AAA18842.1; -.
                                                                                                                                                                                                                                hormone) (Growth hormone :
                                        Conservative
                                                                                                                                                     STANDARD:
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160
179
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151
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HSSP: P01241; 1AXI.
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106
179
217 AA:
                            Similarity
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                                     . 8 ;
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P33093:
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              Query Match
                          Best Local
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                                                                                                                                          SOMA_MACMU
                                        Matches
                                                                                                                          RESULT 2
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Length 213;

08 1;

Score 255;

98.18;

Query Match

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Submitted (APR-2001) to the EMEL/Genbank/DDBJ databases.

-!- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other ilssues to secrete 187-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                             28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Somatotropin precursor (Growt: hormone) (GH) (GH-N) (Pituitary growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LISSUES (BY SIMILARITY).
SUSCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
                                                                                         2 FPTIPLSRIFTONAMIRAHRIHQLAFDTYQEFERAYIPKEGKYSFLQNP 49
                                                                                                                74
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Pred. No. 6.6e-25;
Wismatches 0;
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Pred, No. 6.6e-25;
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BY SIMILARITY.
BY SIMILARITY.
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28-FEB-2003 (Rel. 41, Last sequence update)
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                               0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PS00266: SOMATOTROPIN_1; 1. PS00338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
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InterPro; IPR001400; Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam: PF00103; hormone; 1.
PRINTS; PR00836: SOMATCTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24843 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fan troglodytes (Chimpanzee).
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                                  Conservative
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208 2
217 AA:
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Matches 48: Conserv
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P58757;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EME, outstation the European Bloinformatics Institute. There are no restrictions on is use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (Soc http://www.isb-sib.ch/announce/or send an email to license/sb-sib.ch.
                                                                                                                                                                                            Liu J.C., Makova K.D., Adkirs R.M., Sibson S., J. W.H., "Episodic evolution of growth hormone in primates and emergence of the species specificity of human growth hormone receptor."; Mol. Biol. Evol. 18:945-953(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Saimiri boliviensis boliviersis (Bolivian squirre, nonkey).
Eukaryota, Metazoa, Chordatz, Craniata, Vertebrata, Euteleostomu:
Mammalia, Eutheria, Primates, Platyrrhini, Cebidae, Cebinae, Sammili.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6468
                                                                               Eukaryota, Motazoa, Chordata, Cradiata, Veriebraia, Euteleusiomi,
Mammalia, Eutheria, Primates, Platyrrhidi, Callitrichidae,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95.8%; Score 249; DB 1; Length 217; 97.9%; Pred. No. 3.76-24;
1ve 0; Mismatches 1; Lodels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E102151A12CE6192 CRC64;
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28-FEB-2003 (Rel. 41, Last annotation applace)
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SOMATOTROPIN.
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                    Somatotropin precursor (Growth hormone)
                                                          Callithrix jacchus (Common marmoset).
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PROSITE; PSO0266; SOMATOTROPIN_1; 1.
PROSITE; PSO6338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                            tissues (By similarity).
SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-21265430: PubMed=11371582;
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IPRC01406; Somatctropin.
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Matches 47; Conserv
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208
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P58343:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete 16F-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
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-:-FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGP-1. It stimulates both the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last amoutation update)
Growth hormone variant precursor (GH-V) (Placenta-specific growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota: Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primatos, Catarrhini, Hominidae, Pan.
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C
                                                                                                                                                     Anilo acid upcan
tissues (By Similarity).
SUBSUES (By Similarity).
SUBCELLULAR (BY SECONGS TO THE SOMATOTROPIN/FROLACTIN FAMILY.
SIMILARITY: SECONGS TO THE SOMATOTROPIN/FROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Revol A., Esquivel D., Santiago D., Barrera-Saldana H.; "Independent duplication of the growth hormone gene in three Anthropoidean lineages.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 FPTIPLSRLFDNAMJRAHRLHQIAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27 FPTIPLSHING HINGHING HINGE FEATIPKEOKYSFLONP 74
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-:- TISSUE SPECIFICITY: Expressed in the placenta.
-:- SIMILARITY: BELCNGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 217;
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9515289992C529F7 CRC64:
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Pred. No. 3.7e-24;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOMATOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PROD336; SOMMICTROFIN.
PROSITE; PSOC266; SOMMICTROPIN_1; 1.
PROSITE; PSOC338; SOMMICTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL: AF339060; AAK62287.1; -.
InterPro; iPR001400; Somatotropin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pan troglodytes (Chimpanzee).
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97.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam: PFC0103; hormone; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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79 3
208 2
217 AA;
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modified and this statement is not removed. Usage by and for connected, entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an omail to licensedisb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISSENRYS 1 AND 2).
MEDLINE-88243769; PubMed-379057;
COOKE N.E., Ray J., Emery J.G., Lichhaber S.A.;
TWO distanct species of human growth agrammar-varians mkNA in to-human placenta predict the expression of novel growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P01242; P09587;
21-JUL-1986 (Rel. Gl, Created)
21-SPEH-2003 (Rel. 41, Last Sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
GLOWLh hormone variant precursor (GH-V) (Placenta-specific growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Humau).
Bukaryota, Metazoa, Chordata, Graniata, Vertebrata, Butaleostomi.
Mammaila: Butheria, Primates, Catarthini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The human growth hormone gone family: nucleotide sequences show recent divergence and predict a new polypeptide hormone.":
DNA 1:239-249(1982).
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Igout A., Scippo M.L., Frankenne F., Hernen G.,
"Choning and nucleotide serjanne of placental hGH-V cDNA.";
Arch. Int. Physiol. Blochim. 96:63-67(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                          . DB 1: Sength 217:
1.66-22;
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EMBL, AE374233; AAL72285.1. -.

EMBL, AE374233; AAL72285.1. -.

Interpro: IPR001400; Somatotropin.

R Pfam: Pr00103; Anomono, 1.

R PROSITE; PS00336; SOMATOTROPIN_1; 1.

DR PROSITE; PS00338; SOMATOTROPIN_2; 1.

TOWAR, Signal; Signal
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Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
Gelinas R.E., Seeburg P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Placenta;
MEDLINE=22388257; PubMed=12477932;
Strausberg R.L., Pelngold E.A., Grouse L.H., Derge J.G.
                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY.
BY SIMILARITY.
1592A429075677DE CRC64:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          90.8%; Score 235;
93.8%; Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. (ISCHORM 1).
MEDLINE-83182010; PubMed-7169009;
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79 191 BY
208 215 BY
217 AA; 24990 FW;
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Best Local Similarity 33.8
Matches 45; Conservative
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SOM2_HUMAN
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Altechal S.F. Zeeberg B., Buetow K.E., Schaefer C.F. Bhat N.K.,
Altechal S.F. Zeeberg B., Buetow K.E., Schaefer C.F. Bhat N.K.,
Altechal S.F. Zeeberg B., Buetow K.E., Schaefer C.F. Bhat N.K.,
Builden M., Mordan E., Moore T., Mang J., Hsieh F.,
Builden M., Soares M.B., Bonaldo M.F., Casavant I.L., Scheetz T.E.,
A stapleton M., Soares M.B., Bonaldo M.F., Casavant I.L., Scheetz T.E.,
A Hownstein M.J., Jsdin T.B., Toshhyuki S., Carninci P., Prange C.,
A Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
A Richards S., McCley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gab L.J., Hulyk S.W.,
A Fahry J., Helton B.K., Wuzny D.M., Sodengren B.J., Lu X., Gibbs R.A.,
A Richards S., McClewan M., Madan A., Rodriques S., Sanchez A.,
A Whiting M., Madan A., Young A.C., Shevofenko Y., Bouffard G.G.,
A Rodriquez A.C., Grimchoun J.W., Green E.D., Dickson M.C.,
A Richards A., Schein J.E., Jones S.J.M., Marra M.A.,
Chench A., Schein J.E., Jones S.J.M., Marra M.A.,
Chiman and mouse colla sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBUNIT: Nonomer, dimer, trimer, tetramer and pentamer, disulfide-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linked or non-covalently associated, in homopolymeric and beteropolymeric combinations. Can also form a complex either with GHBP or with the alpha2-macroglobulin complex.

SUBCELLUIAR LOGATION: Secreted, ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                        Signal; Glycoprotein; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MIM; 139240; -. GO:000180; F:peptide hormone; TAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pram; PP00103; hormone: 1.
PROSITE; PS00266; SOMATOTROPIN_1; 1.
PROSITE; PS00338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR501400; Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-99321812; PubMed-10393484;
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MIM; 139240; -.
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PIR; A28072; STHUV2.
PIR; D32435; STHUV.
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SIGNAL
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us-09-423-100-1.rsp

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ID PLL_H
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MEDLINE-GARGHEST DATA FISSER J.M., Fowler P.D.;

Golos T.G., Duraling M., Fisser J.M., Fowler P.D.;

Golos T.G., Duraling M., Fisser J.M., Fowler P.D.;

Coloning of four growth horizone/Chorionic sometimemorropin related complementary deoxyribodyuals: datids differentially expressed during programmy in the rhesis monkey placecula. Firstentially expressed during programmy in the rhesis monkey placecula. For the first rajor in Colonial Stimulating body growth is to stimulate the liver and other tissues to secretal form. Stimulates both the control differentiation and profileration of myshlasts. It also stimulating amino acid uptake and protein synthesis in muscle and other
                                           N-EINKED (GLOND, . .) (POTENTIAD).
RLEDGSPRIGGIENOSYSKPOTKSHNDDALLKNYGLLYGEP
KENDKVETFLRIVGGRSVEGSIGF -> VRVAFITPNEGAP
                                                                                      LASRDMGEKHOCPLESSOALTOENSPYSSFPLVNFFFELST O
PGGEOGKWNNERGRECOPSAWFILLFYHFABAGRWOPPFWA
                                                                                                                                                                                                                                                                                                                                                                                                SOM2_MACMU STANDARD; PRI; 217 AA.
007370: 028494;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Growth hormone variant precursor (GH-V) (Placenta-specific growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Macaca mulatta (Rhesus macaque).
Eukaryota; Merazoa, Chordata; Craniala; Vertebrata; Butelcostemi;
Mammalia; Eurhoria; Primates; Catarrini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tissues.
SUBCELLAR LOCATION: Secreted (By similarity).
IISSUE SPECIFICITY: Expressed in the placenta.
SIMILARITY: BELCNGS TO THE SOMMICTROFIN/PROLAUTIN FAMILY.
                                                                                                                                                                                                                                                                                                           27 PPTIPLSRLPDNAMLAARRLYQLAYDTYQEFEBAYILKBQKYSFLQNP 74
                                                                                                                                                                                                                             Score 228: DF 1: Leasth 217;
Pred, No. 1.66-21;
                                                                                                                                                                                                                                                                                         2 PPTIPLSRLFONAMLRAHRIHQLAFUTYQEFRRAYIPKHQKYSFLQNP
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                                                                                                                   DIOSVLGOV (in isoform 2).
FFIId+VSP, 006233.
R -> W (IN dDSNP:8349).
/FIId+VAR, 0.4592.
I -> T (IN REF. 2).
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GROWTH HORMONE VARIANT
                                                                                                                                                                                                                                                            2: Mismatches
              BY SIMILARITY BY SIMILARITY
                                                                                                                                                                                                 24999 MW;
                                                                                                                                                                                                                            87.7%;
91.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hormone) (Growth hormone 2). GH2.
                                                                                                                                                                                                                                              Best Local Similarity 91.7
Matches 44, Conservative
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            DISULFID
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                                             CARBOHYD
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CHAIN
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SOM2_MACMU
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PIR; I67411; I67411

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"Analysis of a major human chorionic somatomammotropin gene. Evidence for two functional promoter elements.";
J. Biol. Chem. 259:13131-13138(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-APR-1988 (Rel. 07, Last sequence update)
15-SFP-2003 (Rel. 42, Last annotation update)
Lactogen precursor (Chorlomammotropin) (Chorlonic somatomammotropin).
CSRI AND CSH2.
HOMO Sapiens (Human).
Elkaryota Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Murmalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mido Y.C., Smith D.H., Barrera-Saldana H.A., Gelinas R.E.,
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The human growth hormone locus: nucleotide sequence, biology, and evolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIINE-83160916; PubMed-6300056;
Barrera-Saldana H.A., Sceburg P.H., Saunders G.F.,;
Two structurally different genes produce the same secreted human
placental lactogen hormone.";
J. Biol. Chem. 258:3787-3793(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "The human growth hormone gene family: nucleotide sequences show recent divergence and predict a new polypeptide hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The human growth hormone gene locus: structure, evolution, and allelic variations.";
SNA 6:55-70(1987).
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MEDIUNE-87161235; PubMcd-3030680;
Mitt H., Kimellman J., Birnbaum M.J., Chen E.Y., Seeburg P.H.,
Eberhardt N.L., Barra A.;
                                                                                                                                                                                                                                                                                                                                                    FPIIDLSWLFNTAVFRAHHLHKLAFDTYPKLEEAYIPKEQKYSFLRNP 74
                                                                                                                                                                                                                                                            Score 199; DB 1; Length 217; Pred. No. 7e-18;
                                                                                                                                                                                                                                                                                                                                 2 PPTIPLSRLFUNAMLKAHRLHQLAFDTYQEFEEAYIPKEQKYSFLONP
                                                                                                                   BY SIMILARITY.
GROWTH SHOWING VARIANI.
BY SIMILARITY.
BY SIMILARITY.
I. -> F (IN REF. 2).
F -> G (IN REF. 2).
W. BDB116CRC24ER090 CRC64;
                                                                                                                                                                                                                                                                                                5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (GENES CSHI AND CSH2).
                                                                                                          Hormone; Placenta; Signal; Glycoprotein.
HSSP, P01241; HEGO.

InterPro: IPR001400; Somatotropin.
Ptam; PF02103; hormoner, 1.

PKINTS; PR00636; SCWATOTROPIN.

PKOSTER, PS00266; SCWATOTROPIN.1:
PROSITE; PS00388; SCWATOTROPIN.2: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. (SENE CSH1).
MEDLINE-85030426; PubMed=6208192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-89307277; PubMed-2744760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIINE-83182010; PubMed=7169009;
                                                                                                                       26 68X
217 GK
191 8X
215 BX
57 L
152 E
25221 MW:
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                                                                                                                                                                                                                                                              78.58;
                                                                                                                                                                                                                                                                              77.18;
                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genomics 4:479-497(1989)
                                                                                                                                         27
79
208
57
152
217 AA;
                                                                                                                                                                                                                                                                                Similarity
37: Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seeburg P.H.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLL_HUMAN
F01243;
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J00118; AAA98621.1;
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SCMA_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
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                                                                           TISSUE-Placenta, and Uterus;

XX Starusberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Rausner R.D., Collins F.S., Wanner L., Sheuren C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Hhat N.K.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Heng J.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Heng F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Heng J.,

A Brownstein M.J., Osdin T.H., Toshiyuki S., Carninci P., Prange C.,

Raha S.A., McEwan P.J. McKernan K.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J. McKernan K.J., Abramson R.D., Mullahy S.J.,

A Richards S.A., McEwan P.J. McKernan K.J., Abramson R.D., Mullahy S.J.,

A Richards S.A., McEwan P.J. McKernan M., Radan A., Guena and C.B.,

A Richards S.A., McEwan P.J. McKernan M., Radan A., Schein B.D., Bouffard G.G.,

A Butterfield Y.S.N., Krzywinski M., Schechtnko Y., Bouffard G.G.,

B Butterfield Y.S.N., Krzywinski M., Skalsku H., Smallus D.E.,

A Butterfield Y.S.N., Krzywinski M., Skalsku H., Smallus D.E.,

Cheneration and initial acalysis of more time 15,000 full-length

Dans and mouse CDMA Sequences."
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Schneider A.B., Kowalski K., Russell J., Sherwood L.N.:
Adentification of the interchain disulfide bonds of dimeric human placental lacuegen.:
5. Biol. Chem. 254:3782-3737(1979).
-! FUNCTION: SIMILAR TO TAT OF SCHAIOTROPIN.
-! SUBCELLULAR LOCATION: Serreted.
-! KINCELLAULAR EQUIENCE OF CSHI IS SHOWN.
-! SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shine J., Seeburg F.B., Martial J.A., Baxter J.D., Goodman H.M.: "Construction and applysis of recombinant DNA for numan efection; somatomammotropin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 27-217.
MEDINE-72201971: FubMed-4712450:
Li C.H., Dixon J.S., Chung D.; Chung C.H.; Chung Chung C. Chung C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-72016315; PubMed-5286363;
Sherwood L.M., Handwergers S., McLauris W.D., Launer M.:
"Amino-acid Sequence of burman placectal lactogen.";
Nature New Biol. 233:59-61(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sherwood L.M., Handwerger S., McLaurin W.D., Lanner M.
Nature New Biol. 235:64-64(1972).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SECTENCE OF 50-217 FRCM N.A.
MEDLINE=78071761; Pubmed=593368;
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EMBL, J00285, AAA88747.1; ...
EMBL, K02401, AAA521.5.1; ...
EMBL, M15894, AAA522.15.1; ...
EMBL, J03071: AAA52551.1; ...
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UNA 1:239-249(1982).
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                                                            SEQUENCE FROM N.A.
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MEDINE-85261358; Puthwed-2991252;
Litzer D.I.H., Talamantcs F.:
"Nucleotide sequence of mouse prolactin and growth hormone mRNAs and
expression of these mRNAs during pregnancy.";
J. Biol. Chem. 260:9574-9579(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Saps
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Das P., Meyer L., Seyfert H.-M., Brockmann G., Schwerin M.;
"Structure of the growth hormone-encoding gene and its promoter in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Rodentia, Sciurognathi; Muridae, Murinae, Mus.
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IN A DIMER).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 TIPLSALFONAMERAHREHQUAFOTYQEFEEAYIPKEQKYSFLÖN 48
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/FTId-VAR_DOT166.
/FTId-VAR_DOT166.
/FTId-VAR_DOT167.
/FTId-VAR_DOT167.
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80.0%; Pred, No. 1.3e-17;
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01-JAN-1988 (Rel. 06, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE: PSGU266; SOWATOTROPIN_1; 1.
PROSITE: PSGG338; SOWATOTROPIN_2; 1.
Hormone; Placenta; Multigene family; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 KH
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EMBL, BC005921.3. --
EMBL, BC02756, AAH020756.1. --
PIR, A26449, A26449.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00103; hormone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88 p. 1.
8 p. 1.
                                                                                                                                                                             PIR, C32435; LCHUC.
HSSP; P01241; 1A22.
Genew; HGNC:2446; CSH1.
Genew; HGNC:2441; CSH2.
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154
217 AA;
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CONFLICT
CONFLICT
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Matches
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٠. ن Gaps

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DB 1: Length 190;

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Loxedonta africana (African elephant).
Sukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Proboscidea; Elephantidae: Loxodonta.
NCHI_TaxID=9785;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -:- SUBCELLUIAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
PIR: JUSQ19: JR0219.
HSSP: P01246: 18ST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 PPTIPLSRLFDKAMLKAHRLHQLAFDTYOEFEEAYIPKEOKYSFLON
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190 AA; 21761 MW; 058860813DH741F2 CRC64;
                                                                                                                                                                                         BY SIMILARITY.
BY SIMILARITY.
09FBFF6DB14A75D6 CRC64;
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llarity 66.1%; Pred. No. 5.5e-13;
Conservative 6; Mismatches 8
                                                                                                                                                                                                                                                                                                                  61.7%; Score 160.5; DB 1
66.1%; Pred. No. 4.1e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FR4-1991 (Rel. 17, Created)
01-FRB-1991 (Rel. 17, Last sequence update)
01-FRB-2003 (Rel. 41, Last annotation update)
Somatotropin (Growth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C1-3UL-1989 (Rel. 11, Created)
O1-JUL-1986 (Rel. 11, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                  6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thterpro; TPR001400; Somatotropin.
Pfam: PF00103; hormone: 1.
PROSTTE: PS00266; SOMATOTROPIN.]; J.
PROSTTE: PS00338; SOMATOTROPIN.2; J.
                          Electron TPR001400; Sometotropin, Pfan, PF01013; Normanne, PF021013; Normanne, PF03112; PS03165; SOMATOTROPIN_: 1 PR0517E; PS00318; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                         2:855 MW;
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                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD
                                                                                                                                      PRODUCE, ....
Hormone, Pituitary, 52 163
                                                                                                                                                                                                                    188
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                                                                                                                                                                                                                                                                                       Onery Match
Hust Local Similarity
Transa 32; Conserva
                                                                                                                                                                                         52 1
190 1
190 AA:
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Best Local Similarity
Matches 32, Conserv
   HSSP; P01241; 1AXI
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P10756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCMA_LOXAF
                                                                                                                                                                                         CIRCLEID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P20392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CXAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOMA_VULVU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
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                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the FWBE custarion the European Bioinformatics Institute. There are no restrictions on its use by compressing assumed as its comparations as a comparation to structure as a superaction of the statement is not recovered. The second of this statement is not recovered. The second of the statement is the notes of continuous and this statement is not recovered. The second of the continuous or send an email to license agreement (See http://www.isb-sib.ch/annonner.
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Osipova T.A., Bulatov A.A., Pankov Y.A.,

Osipova T.A., Bulatov A.A., Pankov Y.A.,

"Structural studies of tryptic peptides from large cranouth broadle

fragments of sei whale (Balainoptera borealis) somatorropin.":

Bloorg. Khim. 4:1589-1599(1978).

-1-FUNCTION: Plays an important role in growth control. Its mujor

role in stimulating body growth is a stimulate the liver and
other tissues to secrete 197-. It stimulates both the

differentiation and preliferation of myoblasts, It also stimulates
amino acid uptake and protein synthesis in miscle and other
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Mammalia: Eutheria; Cetartiodactyla; Cetacca; Mystineti;
Baldanopteridabe; Balaenoptera.
NCBL_TAXID-9766;
amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1: Length 216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -i- SUBCELLULAR LOCATION: Secreted.
-i- SIMILARITY: BELONGS TO THE SCMATOTROPIN/PROLACTIN FAMILY.
                                                                                       SIMILARITY: BELONGS TO THE SOMATOTROPIN/FRILACIEN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEGKYSFLON 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY SIMILABITY.
SOMATOTROPIN.
BY SIMILABITY.
BY SIMILABITY.
BY SIMILABITY.
W. 98666A3AE25D65FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yudaev N.A., Pankov Y.A., Bulatov A.A., Osipova I.A.;
"Amino acid sequence of seiwhale somanotropin.";
Biokhimiia 47:1659-1669(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 161.5; DB 1;
Pred. No. 3.5e-13;
6; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61-007-1993 (Rel. 27, Created)
01-00T-1993 (Rel. 27, Last sequence update)
28-FFB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE, PS00266: SOMATOTROPIN_1: 1. PROSITE, PS00338: SOMATOTROPIN_2: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                     tissues.
SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; B23911; SFMS.
HSSP, P01246; IBST.
MGD; MG1:95707; BST.
IntcPro; IPR601400; Schatotropin.
Pfam: PF00103; bormone: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Balaenoptera borealis (Sei whale)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-83000569, PubMed-7115813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Somatotropin (Growth hormore)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24716 NW;
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X02891; CAA26650.1; ...
EMBL; 245663; CAA86658.1; ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 58.1
nes 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
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78 1
206 2
216 AA;
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AC SONA_BALBO
AC SONA_BALBO
DT C1-CT-1993 {
DT C1-C
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Matches

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Gaps

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Indels

DB 1: Length 190;

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Endocrinol. 150:121-128(1999).
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                                                                                                                                                                                                       SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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189
214
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es 32; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                              tissues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P46404;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              December 1.5., Teske E., van Garderen E., Rutteman G.R., Mol J.A.; "Extrapituitary growth hormone expression in the dog is initiated at the normal pituitary transcription start site in the mammary gland and at multiple upstream sites in lymphoid cells."; Submitted (MAR-1997) to the EMBL/GenBank/DD3J databases.
                                                                                                                                                                                             Lantinga-van Leeuwen I.S., Oudshoorn M., Mo. J.A.;
"Canine mammary growth hormone gene transcription initiates at the
pituitary-specific start site in the absence of P.L-1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=94266166; PubMed-6236387;
Ascacio-Martinez J.A., Barrera-Saldana H.A.;
"A dog growth hormone cDNA codes for a mature protein identical to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cabis familiaris (Dog).
Eukaryota, Metazoa, Chordata: Craniata, Vertobrata, Entoleostori:
Mammalia: Eutheria: Carnivora: Fissipedio: Canidae: Canis.
                                                Eukaryota: Metazoa: Chordasa; Craniata: Vertebrata: Buteleostomi;
Mammalia: Butheria: Carnivora; Fissipodia; Canidae; Vuipus.
NCBL_TaxiD-9627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PB 1: Length 19C:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -i- SUBCELLULAR LOCATION: Secreted.
-i- SIMILARITY: BELONGS TO THE SOMATOTROPIN/FROLACTIN FAMILY
HSSP: P01246: 1687.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 PPTIPLSRLFDNAMLRAHRUHQLAFDTYQBFEFAYIFKEGKYSFLQN 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.3%: Score 159.5; FB 1
68.1%: Pred. No. 5.5e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P3371; OGTUT5;
01-FEB-1994 (Rel. 25, Treated)
16-OCT-2001 (Rel. 42, Last sequence update)
Somatotropin precursor (Growth hormone);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6: Mishatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00103; hormone: 1.
PROSITE; PS00266: SOMATCTROPIN_1; PROSITE: PS00389; SOMATOTROPIN_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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MEDLINE-993371:3; PubMed-16411306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      interPro, IPR001400; Somatotropia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52 163 B
180 188 B
190 AA: 21731 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                              Vulpes vulpes (Red fox).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sene 143:277-280(1994).
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Best Local Similarity
Matches 32; Couserv
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   SOUR PRESENTATION OF THE PRESENT OF 
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-!- FUNCION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate he liver and other tissues to secrete (GF-1. It stimulates both the differentiation and proliferation of myobiasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE*Pituitary;
MEDLINE*993697.3; PubMed*7642118;
Castro-Peralta F., Barrera-Saldana H.A.;
"Cloning and sequencing of cDNA encoding the cat growth hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Marralia; Eutheria: Carnivora; Fissipedia; Felidae; Pelis.
NCBI_raxTD-9685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 216;
                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE SCMATOTROPIN/PRCLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 FPTIPLSRUFDNAMIRAHRLHQLAFDIYQEFEBAYIPKEQKYSFLQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A8ADIDD59F1DAAED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
SCMATOFROPIN.
BY SIMILARITY.
BY SIMILARITY.
S -> G (IN REF. 1).
N -> I (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.3e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
26-FEB-2003 (Rel. 41, Last amnotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 6.3c
6, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61.3%; Score 159.5;
68.1%; Pred. No. 6.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Somatotropin precursor (Growth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Pituitary;
MEDLINE-96194906; PubMed-8654953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    216 AA; 24468 MW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Felis silvestris catus (Cat).
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FUNCTION: Plays an important role in growth rolled. Its major role in stimulating body growth is to simulate that liver and other tissues to screele ideal. It stimulates body the differentiation and proliferation of mycoblasts. It also stimulates amino acid uptake and proliferation of mycoblasts. It also stimulates amino acid uptake and proliferation synthesis in miscle and orbits successive subsciences of stimulations. Secreted.

SURGELLUIAR LOCALION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.3%; Score 159.5; DB 1; Length 216; 68.1%; Pred. No. 6.3e-13;
tive 6; Mismatches 8; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27 FPAMPLSSLFANAVLRACHLEGLAADTVKEFERAYIPEGGRYS-TGN 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 FP11PLSRLFDNAMLRAFRLHQLAFDTYQEFEBAYTPKBQKYSFLON 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOMATOTROPIN.

BY SIMILARITY
BY SIMILARITY
N -> T (1N REF. 2).
T -> A (1N REF. 2).
C -> A (1N REF. 2).
C -> P (1N REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                   Pfam: PF0c103: hormone: 1.
PROSITE: PS00266; SCMATOTROPIN_1; 1.
PROSITE; PS00338: SCMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                               EMBL; G25973; AAA67294.1; ·.
EMBL; U13390; AAA96142.1; ·.
EMBL; JC4632, JC4632, BSPP P01246; 1BST.
InterPro: IPR301400; Somatotropin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal.
26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Guery Match
Best Local Similarity 68.1
Matches 32; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26
159
181
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27
78 1
206 2
26 2
26 1
159 1
181 1
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DISULFID
CONFLICT
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Search completed: September 15, 2003, 12:01:29 Job time : 5.56631 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 15, 2003, 11:54:30 ; Search time 19:1434 seconds (Without aliqueents) 660.526 Million cell appares/sec Run on:

US-09-423-100-1 260 I MFPTIPLSRLEDNAMLRAHR......QEFBEAYIPKBGKYSTLQNP 49

Title: Perfect score: Sequence:

BLCSUM62 Gapop 10.0 / Gapext 0.5 Scoring table:

670525 seqs, 258052604 residues

Searched:

R 30525 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 6 Maximum DB seq length: 2000800000

Post-processing: Minimum Match 1968 Maximum Match 1968 Listing first 45 summaries

Database :

SPTREMBL\_23:\*

1: Sp\_acteria:\*

2: Sp\_bacteria:\*

3: Sp\_fung1:\*

5: Sp\_invaria:\*

6: Sp\_invaria:\*

7: Sp\_mamman:\*

8: Sp\_phage:\*

8: Sp\_phage:\*

7: Sp\_phage:\*

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Pred. No. is the number of results predicted by chunce to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

Opery Match	Cuery Match Length DB	DB	ID	Description
SS. 8	217	w	O8WNEO	Obwned ateles gent
87.7	245	₹.	014644	014644 homo sapien
81.9	212	ų,	007368	Q07368 macaca mula
81.9	217	œ	907367	007367 madada mula
77.3	217	S	207369	QC7369 macada mula
75.8	2:7	٠,•	014407	Q14407 home saple:
75.0	217	S	6GNM80	Q8wnd9 ateles qeof
55.4	217	¢:	C8MI74	Q8mi74 callithrix
61.7	216	Η	070615	070615 spalax 1euc
61.3	52	ç	Q5TV91	29tv91 equus cabal
61.3	215	9	Q8M173	O8mi73 delphinus d
61.3	216	9	Q8HYE5	C8hve5 ailuropoda
59.8	216	Ξ	Q9R2C3	Ograca mus mascula
59.2	216	Ξ	C9JKM4	09*km4 cavia porce
58.5	178	(c)	095MJS	O95mi5 tarsius bad
57.5	204	ω	095205	095205 ovis artes

C14643 homo sapien O95mj6 tarsiis syr O91kg0 cavia porce O9tcy2 capra hircii O9tcy40 bos indicus C8mi75 callithrix C8957 sus scrofa O9bec0 tragulus ja O9tr19 macropus ru O9tr19 macropus ru O9tr16 capien O9tr16 capies pat O9tr16 clarias pat O9tr16 clarias gar O9tr16 clarias gar O9tr16 clarias gar O9tr16 clarias gar O9tr26 clarias gar O9tr26 clarias gar O9tr26 carassius a O9tw26 carassius a	 update) update)  cpidae: Cebidae:	databa databa e6 CRC6 E6 CRC6 5; Leng 5; 1 1n 11:1111111111111111111111111111111
014643 095Mide 095Mide 095Mide 095Mide 0970W9 08857 099EB9 099EB9 099EB9 099EB9 099EB9 099EB9 099EB9 099EB9 090Mide 080CB1	z	of the growth hormon the EMBL/GenBank/DDBJ atotropin. TYROPIN_1: 1. TYROPIN_1: 1. TYROPIN_2: 2. TYROPIN_2: 2. TYROPIN_3: 1. TYROPIN_4 42829FF41EEAAI 4 MW: 42829FF41EEAAI 4 MW: 42829FF41EEAAI 1 MW: 42829FF41EEAAI 1 MW: 42829FF41EEAAI 1 MW: 42829FF11EAAI 1 MW: 42829FF1111111111111111111111111111111111
00 00000000 00 0077 0 00 0000000000000	ARRY; P. el. 2C. Creel. 20, Las. cel. 23, Las. cacx.handed compares; Primates; Primate	tripe trope trope Sc Sc Sc Sc Sc Sc Sc Sc Sc Sc
40-00000000000000000000000000000000000	, 2C, 2O, 23, 23, 23, sant	nn of ",", ", ", ", ", ", ", ", ", ", ", ", "
24666666666666666666666666666666666666	PRELIMINARY (TrEMSLIFE).	duplication in Incation Incation Incation President Incation 34, AAL7228 34, AAL7228 500400, Science S
υ ми: пи м и м м и м ч ч ч ч ч ч ч м ч м ч ч ч ч	PRELIMINA 02 (TEMBLIF 03 (TEMBLIF 04 (Bla 04 (Bla 04 (Bla 05 (Bla	dent duplic lidean linea can the control of
117 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"independent duplication of the gro- Anthropoidean lineages." Submitted (APP-2001) to the EMBL/Ger Submitted (APP-2001) to the EMBL/Ger EMBL, AP374234; AAL72286.1; - InterPro; TPR001400; Scarafortropin. PROSITE; PS00266; SOMATOTROPIN.1; 1 PROSITE; PS00266; SOMATOTROPIN.1; 1 PROSITE; PS00388; SOMATOTROPIN.1; 1 PROSITE; PS00388; SOMATOTROPIN.2; 2 SEQUENCE 217 AA, 24894 MW; 4258 Hest Local Similarity 97.9%; Pred. in Matches 47; Conservative 0; Misches 47; Conservative 0; Misches 47; Conservative 0; Misches 47; Conservative 0; Misches 45; Conservative 0; Misches 45; Conservative 0; Misches 4444 PRELIMINARY; PRT; CO14644; PRELIMINARY; PRT;
	PESSULI AC 0.00 M M	CLOC E SIGH

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Best Local Similarity
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                                        PESULT 4
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                                                                                                                                                                                                                      TISSUE=Term placenta:
MEDILINE-68375737; PubMed 9709463;
Boguszewski C.L. Svenskon P.A., Jansson T., Clark R.,
Carlsson L.M.S., Carlsson B.;
"Closing of two nove; growth hormore transvripts expressed in Luman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Metazoa, Chordata, Craniata, Vettebrata, Buteleostemi,
Mammalia, Eutheria, Primates, Catarrhisi, Corcop.thecidae,
Cercopithochemy, Macaca,
NCRLTaxID=9544;
                                                                                                  Homo sapiens (Human).
Eukaryota, Metazda; Chordana; Craniata; Vertebrata; Euthi-eost mir
Mammalia; Eutheria; Primates; Catarthini; Bominidae; Horo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.7%; Score 228; 55.4; Length 245; 91.7%; Pred. No. 9.56-23; ive 2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81.9%; Score 213: FR 4: Lonath 212: 78.7%; Pred; No. 8.76:21: tive 9: Mismatches 1: Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 PPTIPLSREFDNAMLRAFRLYGIAYDIYQEPSHAYILKBOKYSFLÖNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPTIPLSRIFDNAMLRAFRLHQ1AFDTYQEFBEAYIPKBGKYSFLUNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2003 (TrEMBLrel. 23, Last annotation update)
Somatotropin 2 precursor (Growth hormone 2) (Fragment)
Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE 212 AA; 24525 MW; 275091106256E6FF GROS4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14CC7F8CP75D91C8 CRC64;
01-JAN-1958 (TERMELTEL. 35, Created)
01-JAN-1998 (TERMELTEL. 35, Last sequence update)
01-DBC-2801 (TERMELTEL. 19, Last annotation update)
Placement growth hormone isoform high-v4 precursor.
                                                                                                                                                                                                                                                                                                                                         EMBL: AFOGOSTIOD. Metab. 83:2878-2885(1598).
EMBL: AFOGOGO: AA871825.1: -.
HSSP: P01241: 1A22.
InterPro: IPROJ1400: Somatotropin.
PROSTE; PS00266; SCMATOTROPIN.: 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26 F
27101 NW:
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Best Local Similarity 78.7
Matches 37, Conservative
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Best Local Similarity 91.7
Matches 44, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          245 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                       SECUENCE FROM N.A.
                                                                                                                                                              NCBL_TaxID-9606;
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01-NOV-1996
                                                                                                                                                                                                                                                                                                                        placenta."
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QC7368
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"Clening of four growth hormone/chorionic somatomammotropin-related
complementary decay: bonucleic acids differentially expressed during
pregnancy in the thesus monkey placenta.";
EMBL: L16554: AAA18841.1;
EMBL: L16554: AAA18841.1;
                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Midpregnancy placenta:
MEDLINE-94008724: PubMed-8404617;
Goles 1.3., Durning M., Fisher J.M., Fowler P.D.;
Goles 1.3., Durning M., Fisher J.M., Fowler P.D.;
Coping of four growth Formone/Chorinoic somatomemotropin-related complementary deoxyribonucleic acids differentially expressed during pregnancy in the riceus monkey placenta.";
Pregnancy in the riceus monkey placenta.";
Enderinology 13x:774-1752(1993).
EMBL, Ed6522, AAA18639.1;
EMBL, Ed6522, AAA18639.1;
EMBL, Ed6522, AAA18639.1;
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01-NOV-1996 (TEMBLE). 01, Last sequence update)
01-MAR-2003 (TEMBLE). 02, Last annotation update)
Choritonic somatomanmotropin-3.
Choritonic somatomanmotropin-3.
Eukaryota, Metazoa, Corodata, Craniata, Vertebrara, Butelcostomi;
Mammalla, Eutheria, Frimates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                  Macada mulatta (Rhesus macaque).
Enkaryota, Merazoa: Chordata; Craniata; Verrebrata; Buteleostomi;
Rammalia; Butheria; Primaces; Catarrhini; Cerdopithecidae;
Cercopiticolmae; Macada.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28 PSVPLSRLFDHAMIQAHRLHQLAFDTYQEFEEAYIPKEKKHSLMENP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 6; Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FFSAA8915131F2BC CRC64;
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SEQUENCE 217 AA: 24874 MW; FIEBGAFUBBAIB185 CRC64;
                                                       01-NOV-1996 (TrEMBLIEL 0), Created)
01-NOV-1996 (TrEMBLIEL 0), Last sequence update)
01-NAR-2033 (TrEMBLIEL 23, Last annotation update)
04-origins somatomammofropin-1.
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Pred. No. 3.8c-19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81.9%; Score 213; DB 6;
78.7%; Pred. No. 9e-21;
tive 9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217 AA.
217 AA.
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Pfam: PF00163; hormone: 1.
PrOSITE: PS06266; SOMATOTROPIN_1: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             interPro; IPROC1400; Somatotropin, Pfam; PFSC13; hormone; I. PROC1403; SOMATCTROPIN, PROSTITE, PSO0336; SOMATCTROPIN_2; I. SEQUENCE 217 AA; 24942 MW; FFSAA
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PR.:
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MEDLINE-94008724; PubMed-8404617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77.38; 74.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cuery Match
Rest Local Similarity 78.7
Matches 37, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY:
PRELIMINARY;
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                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9544;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primatos; Platyrrhini; Callitrichidae; Callithrix.
                       Arcles geofficyi (Black Handed spider monkey).
Eskarycia, Metazoa: Chordata; Cramiata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Platyrrhini; Cebidue; Atelinae; Ateles.
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Wallis O.C., Wallis X.;
"Characterisation of the GH gene cluster in a new-world monkey, the
marmoset (Callibrix jarchus).";
J. Mol. Endocrinol. 0:0-0(2002).
EMBE: AJ489811: CAD34022.1;
Interpor IPP001400; Somatotropin.
Prim: PP00103; hormone: I.
PRINTS: PR00636; SOMATCIROPIN.
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                                                                                                                                                  PROVED A., Esquivel D., Santiago D., Rarrera-Saldana H.;
"Independent duplication of the growth hormone gene in three Authropoidean lineages.";
Submitted (APR-2031) to the EMBL/GenBank/DDBJ databases.
EMBL, AF314255, AA172297.1;
Interprop | PR0014040; Somatotropin.
Ptam: PP0103; normone; 1.
PRINTS; PR00836; SOMATOTROPIN...
PROSTITE, PS01026; SOMATOTROPIN...; SEQUENCE. 217 AA, 25293 MW; 741745A1B75C053E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22 FPRIPLSRLFGDAMLRAHQLHQVAFDTYQELEENGIPKKQKYFFLRNP 74
                                                                                                                                                                                                                                                                                                                                                                                                                         Oucry Match 75.0%; Score 195; DB 6; Length 217; Best Local Similarity 77.1%; Pred. No. 2.56-18; Matches 37; Conservative 5; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GROWTH HORMONE-LIKE PROTEIN 6. 5ECF148798278FIA CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 65.4%; Score 170; DB 6; Length 21 Local Similarity 68.1%; Pred. No. 6.1e-15; es 32; Conservative 7; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 PTIPLSKLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEGKYSFLQNP
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01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-001-2032 (TrEMBLrel. 22, Created)
01-001-2032 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Growth hormone-like protein 6 precursor.
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217 GR
25177 MW;
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21 AN;
                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                         NCBI_TaxID-9509;
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C1-NOV-1996 (TrEMBirel. 01, idea; sequence update)
O1-NAR-2003 (TrEMBirel, 23, Last amendation update)
Chorionic somatomammetropii CS-2 (Chorionic somatomammetropin hormene
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    90,50
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Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A., Selinas R.E.
Seeburg P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
MEDGINE=91102558; PubMed=1980158;
Vnencak-Jones C.L., Phillips J.A. 171.;
Vnencak-Jones C.L., Phillips J.A. 171.;
Vnencak-Jones C.L., Phillips J.A. 171.;
Soles of Ala repeate:
Science 250:1745-1748(1950).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The homan growth hormone locus: nucleotide sequence, biclody, and evolution. \mathbb{I}_{\tau}
                                                                                                                                                                                                                                                                                                                                                                            Bukaryota, Metazoa, Chordata, Craniata: Vertebrata, Eutalcostomi:
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
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                                            3 PTIPLSREFINAMURAHRUNGGAFOTYGEFEEAY1PKEOKYSFLØNP 49
                                                                      28 PSVPLSRLFDNIMMQAHRLHQDAFDIYOBFEKIYIPKEKKHSLMGNP 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             75.8%; Score 197; DB 4; Length 217; 80.0%; Pred. No. 1.36-18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
  Indels
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Submitted (JUL-2002) to the EMBL/SenBank/HUBI databases.
EMBL; J03071; AAAS2553.1; ...
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Submitted (JAN-2002) to the EMBL/GenBack/DFB.; databases.
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Last annotation update)
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  8; Mismatches
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PRIMTS, PRO0918; SOMATOTROIL.
PROSTIP: PSO0266; SOMATOTROPIC.; 1.
PROSTIP: PSO0388; SOMATOTROPIC.; 1.
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01-MAR-2002 (TrEMbLrel, 20,
01-MAR-2002 (TrEMBLrel, 20,
01-0CT-2002 (TrEMBLrel, 22,
Growth hormone.
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35; Conservative
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                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                             Homo saplens (Human).
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TISSUE-Placenta:
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  Matches
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Q14407
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SEQUENCE 216 AA; 24383 MW;
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Best Local Similarity 68.18;
Matches 32; Conservative 6
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                                                                                                                                               Growth hormone precursor.
PRELIMINARY:
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Best Local Similarity
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CHAIN 27 2
SEQUENCE 215 AA;
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C8HYE5
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                                                                                                                                                                                                                                                                     Lioupis A., Nevo E., Wallis M.: **Cloning and characterisation of the gene encoding noic Fat (Spalax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-99160468: PubMed-19051423:
Caetano AR., Pomp D., Marray J.D., Bowling A.T.;
Comparative mapping 00 18 equite type I quies assigned by sometimely phyrid analysis.";
Amm. Genome 10,271.276 (1995).
EMBL: AF097589: AAD25992.1;
InterProj. IPR001400; Somatotropin.
                         Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Burelessiani;
Mammalia; Eutheria; Rodontia; Sciuroquathi; Miridae; Spalacinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Būkaryota; Metažoa; Chordata; Graniala; Vertobrala; Euteleoslusu;
Mammalia; Butheria; Perissodactyla; Equidae; Equus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27 FPAMPESNLFANAVLRAGHLIGGLAADVYKEFERAYTFEGGRYS-1QN 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPTIPESRLFDNAMLRAHRLHQLAFDTYOSFEEAYIPKEGKYSFLON 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S: indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 26 FOTENTIAL.
27 216 GROWTH HORNONE.
216 AA: 24627 MA; EEABBAS23BAOADFE CPC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52 AA: 5835 MW; 20A9E9E9139E9BNA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
Last sequence update)
Last annotation update)
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20
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Pred. No. 3.2e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 51.7%; Score 160.5; DB 13
Best Local Similarity 58.1%; Pred. No. 1.20-13;
Matches 32; Conservative 6; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52 AM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6: Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS: PRODUSE SOMATOTROPIN.
PROSITE, PS00266. SOMATOTROPIN_; 1.
PROSITE, PS00336: SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                 ehrenbergi) growth hormone.";
J. Mol. Endocrinol. 22:29-36(1959).
EMBL: AJG058(19: GAA06716.1;
HSSP: PG1241: TAXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro/ IPRC01400; Somatctropin.
Pfam: PF06103: Sormone: 1.
                                                                                                                                                                                                                                     MEDLINE-99124645; PubMed-9-24177;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00103; hormone; 1.
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Best Local Similarity 68.1
Matches 32; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Equus caballus (Horse).
                                                                                                                                                                                                           SEQUENCE PROM N.A.
                                                                                                                                                  NCB1_Tax10-30637;
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                                                                                                                        Nannospalax.
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SEQUENCE
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QBMI73
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0997991
AC 091799
AC 09179
DE 01-MA
DT 01-MA
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                                                                                                         Delphinus delphis (Sadaleback dolphin) (Black sea dolphin).
E.karyota; Metazos; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Cetacea; Odontoceti; Delphinidae;
                                                                                                                                                                                                                                                                     TISSUE-Liver;
Manio. Z., Wallis O.G., Wallis M.;
"Cloning and characterisation of the GH gene from the common dolphin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Growth Formone precursor.

Aluropoda melanoleuea (Giant panda).

Bukaryota: Metazoa: Chordata: Craniata: Vertebrata: Buteleostomi:
Mancalia: Eutheria: Carnivora: Fissipedia: Grsidae: Aluropoda.

WCB:_TaxID*9646:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 216;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SECUENCE FROM N.A. 1550-1560 N.A. 1550-1560 N.A. 1550-1560 N.A. 2hu M. Zhang A.: "Cloning and expression of cDNA encoding growth hormone from historopida melanoleuca": Submitted (AUG-2002) to the EMBI/GenBank/DDBJ databases. BMBL AF$40936: AAN77228.1; -..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 PPTIPLSRLFUNAMIRAHRIHQLAFDIYQEFEBAYIPKEQKYSFLQN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Indels
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                                                                                                                                                                                                                                                                                                                                  216 GROWTH HORMONE.
24509 MW: 1EC467A84CCFEBC2 CRC64;
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01-0CT-2002 (IrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0AAK-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NAR-2003 (TTEMBLrel. 23, Created)
91-KAR-2003 (TTEMBLrel. 23, Last sequence update)
91-NAR-2003 (TTEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 159.5: DB 6;
Pred. No. 1.6e-13;
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RESULT 13

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Search completed: September 15, 2003, 12:03:27
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SEQUENCE FROM N.A.
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095MC5;
    RESULT 15
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01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last senotation update)
Growth hormone precursor.
Growth hormone precursor.
Eavia porcellus (Guinea pig).
Eukaryota, Metazoa: Chordata; Craniata: Vertebratus Eitelssetumin Mammalla: Furbaria: Rodencia: Hystricomenta: Gaviader Casia.
                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata: Craniata, Vortebzata; Euteleostumi,
Mammalia: Eutheria, Rodentas Schurognathi, Muridae; Musinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nguyen T.N.K., Lichhaber S.A.: "Mouse Growth Hormone Locus: Nuclectide Sequence and Phylogenetic Analyses.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 PPTIPISRLFONAMIRAHRIJHQLAFDIYQEFHHAYIPKHQKYSFIQN 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59.8%; Score 155.5; UB 11; Length
66.0%; Pred, No. 5.5e 13;
tive 6; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9: Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases
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ENEL, U343621, 1AX1

HSSP, P01241, 1AX1

FOURTH, PF01013, horrone, 1.

PROBATICAL SOMATOTROPIN, 1.

PROSITE, PS00266, SOMATOTROPIN, 1.

PROSITE, PS00338, SOMATOTROPIN, 2, 1.

SEQUENCE 216 AA, 24682 MW, FC2A66DA92536B18 CRC64,
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27 216 GROWTH HORMONE.
216 AA: 24822 MW: 45996BEI19808DD3 CRC64;
                                                                                                            01-MAY-2000 (TrEMBLrel, 13. Created)
01-MAY-2000 (TrEMBLrel, 13. Last sequence update),
01-WAR-2003 (TrEMBLrel, 23. Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59.2%; Score 154; Db ll:
67.4%; Pred. No. 8.9e-13;
acive 5; Mismatches 9;
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                                        216 AA
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                                        PRT:
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Pfam; PF00103; hormone: 1.
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Nguyen T.N.K., Liebhaber S A.:
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Best Local Similarity 66.08
Matches 31: Conservative
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                                        PRELLMINARY:
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Best Local Similarity
Thes 29; Conserve
                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=16090;
                                                                                                                                                                                                                                Growth hormome
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SIGNAL
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Q9R2C3
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MECLINE-21265430: PubMed-11371582;
Liu J.C., Makova K.D., Adkins R.M., Gibson S., Li W.H.;
Liu J.C. wakova k.D., Adkins R.M., Gibson S., Li W.H.;
Episodic Evolution of Growth Hormone in Primates and Emergence of the
Species Specificity of Human Growth Hormone Receptor.*;
Mci. Biol. Evol. 18:485-953(2001).
Exmb., AF39081; Aak62308.1;
Intervo, IPR001408: Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                     01-DEC-2001 (TEMBIRE) 19, Last sequence update)
01-MAR-2003 (TEMBIRE) 19, Last annotation update)
Growth hormone (Fragment).
Tarsius bancanus (Western tarsier) (Horsfield's tarsier).
Mammalia: Eutheria: Chordata: Craniata; Vertebrata: Bureleostomi: Mammalia: Eutheria: Primates: Tarsii; Tarsiidae: Tarsius.
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      178 AA.
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PROSITE; PS00266; SOMATOTROPIN_1; J.
   PRT;
PRELIMINARY:
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Primary amino acid Natural human 22kD

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Searched:

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ABG$4910
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AAP81226
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AAY1485
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WC9950302-AI
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AAY42856;
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AAY42856
Chimeric protein,
Human growth hormo
Human growth hormo
Euman anti-angioge
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Human growth hormo
Pusion protein of
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               Gentler Version 5.1.6
Copyright (c) 1993 - 2003 Compage 1.66.
                                                                                                                                                                                                                                                                                                                  hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                    1107863 seqs, 158726573 residues
                                                                                                        September 15, 2003, 11:44:15 :
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Maximum Match 100%
Listing first 45 summaries
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AAW92265
AAY42861
AAP91041
AAP90129
AAW92264
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AAR11740
AAR03255
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Gapop 16.0 , Sapext 0.5
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length: 200000000
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Maximum DB seq
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This sequence represents an N-terminal transmant of hossin growth homeone (hGH) which is a component of a chineric protein (AAV42661) which also contains a kinacinostlin precursor (AAV42869). He 5GH portion of the chineric protein acts as an intramolecular chaperone (1MG) for the chineric protein acts as an intramolecular chaperone (1MG) for the financial acts and intramolecular content of protein to be removed after (50.41Mg has taken place). Production of recombinant human insulin with correctly linked cysteine bridges with fewer necessary procedural steps, and hence issulting in a higher yield of human insulin with correctly linked cysteine bridges with fewer necessary procedural steps, and hence issulting in a higher yield of human insulin The IMC sequences not only protect insulin sequences from intracellular degradation by a microorganish host, but sequence the folding of the fused insulin procursor in commercially used; in interactions among the fusion proteins, thus a leading folding of the interactions among the fusion proteins, thus a leading folding of the fusion protein states and concentrations. The procedural steps of cyanogen bromide cheaved, exidually established purification steps can this be eliminated, accentrations and related purifications of mercaptum or turn are of hydropicit;
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                                                  Claim 5; Page 28: 46pp; English.
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Best Local Similarity
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peptides can be used for preventing or treating e.g. maignant tumours, anglibroma, arteriavencies malformation, arthritic such as rheumatoid artifits, atterosciencic plaques, conneal graft necesscularisation, delayed wound healing, proliferation, granulations such as those occurring in hemophilic joints, inappropriate vascularisation in wound healing such as hyperticiphic scars or keloid scars, necesscular glaucoma, ocular tumoir, uvatis, non-union fractures, Oslar-Weber syndrome, psoriasis, pyogenic glaucoma, retrolental fibroplasia, scleroderma, solid tumours, Kaposi's sarcoma, trachoma, vascular adhesions, chronic varioose ulcors, leukaemia, and reproductive disorders such as follicular and luteal cysts and choriocarcinoma. They can also be used as contraceptive agents. DNA encoding the peptides can be used in gene therapy. The measurement of abnormal levels of N-terminal fragments of health, hGH-V, prolactin or hPL can be used in assays for impairment of vascular development associated with pre-eclampsia, intrauterine growth retardation, and placental
                                                                                                                                                                                                                                        this invention describes novel human anti-anglogenic peptides derived from 10 to 150 consecutive amino acids selected from the N-terminal end of the hard placental lactogen (hPL), human growth hormone (hGH), growth hormone variant (hGH-V), or human prolactin. Such peptides (i) inhibit capillary endothellal cell proliferation and organisation (ii) inhibit capillary endothellal cell proliferation and organisation (ii) inhibit capillary endothellal cell proliferation and organisation (ii) inhibit less, hor specific receptor which does not bind an intact full length hGH, hPL, prolactim or hGH-V. The invention also describes a method for diagnosing a probable abnormality of placental vascularisation during prequency. The peptides can be used for treating an angiogenic disease in modulating vascularisation of a patient's placenta. In particular, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MFPT1PLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               insulin; precursor; growth hormone; chaperone; intramolecular; folding; conformation; chimeric protein; cleavable; recombinant;
                                                                                                              New anti-anglogenic peptides - comprise N-terminal fragments of
numan placental lactoren, human growth hormone, growth hormone
variant or human prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 134;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 470; DB 20;
100.0%; Pred. No. 8.8e-40;
ive 0; Mismatches 0;
    Weiner RI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 IPSNREETQQKSNJELLRISLLIOSWLEPVO 92
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    faylor R,
                                                                                                                                                                                                     Claim 4: Page 49-50: 67pp: English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY42861 standard; protein; 150 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric protein, SEO ID 7.
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    Struman I,
                                               WFI: 1999-045192/04
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es 92; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 AA;
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                                                                    N-PSDB; AAXC1707
Martial JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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AAY42861
    3
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90

Home sapiens

Synthetic

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Human growth cormone segment, used at the N-terminal of a fusion protein, which contains a thrombin recognition site, and human beta nerve growth factor (beta-NGF) at the C-terminal. Beta-NGF can be used to control geriatric dementia and other nervous disorders, and can be released from the fusion protein by incubation with thrombin (see AAN90577-8, AAP91034, AAF91299).
                                                                                                                                                                                                                                                                                                     w human nerve growth factor gene encoding fusion protein having cleavage site for thrombin, useful for treating gerlatric
                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure: page 21; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 98.9%;
Matches 91; Conservative (
                                                  89EP-0102795
                                                                                                 88JP-0035042
                                                                                                                                                                                                                                                  WPI; 1989-243092/34
                                                                                                                                                   CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140 AA;
                                                                                                                                                   HOSOL ( LYDI)
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                                                  17-FEB-1989:
                                                                                                 19-FEB-1986;
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61-NOV-1989
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                                                                                                                                                                                                      Ohtsuka E;
                                                                                                                                                                                                                                                                                                       New Cuman
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vector.
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AAP90129
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     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a chameric protein, which contains an N-terminal fragment of human growth hormone (h6H) of the sequence given in AAV42855, a cleavable peptide linker (AAV42857), and a human insulin precursor comprising insulin A and B chains (AAV42859). The h6H portion of the chimeric protein acts as an intrancledular chaperone (lNC) for the insulin precursor, enabling it to find correctly. The cleavable peptide linker has a C-terminal Arg residue which enables the r6H portion of the chimeric protein to be removed after (olding has taken protein an provide himan insulin with correctly inhed cysteine bridges with fewer necessary procedural steps, and nemer resulting climeric protein can provide himan insulin with correctly inhed cysteine bridges with fewer necessary procedural steps, and nemer resulting the higher protein can invariant degradation by a microorganism issulin to sequences from intracellular degradation by a microorganism issul, but allocated for the fusion proteins and decrease the intermolecular interactions among the fusion proteins and decrease the intermolecular interactions among the fusion proteins and decrease the intermolecular procedural steps of cyanogen mosable cleavage, widative supplicitives and related purification siegs con this allocated, along with the corrections and related purification siegs can this be editinated, along with the record of high concentrations of mercapten or the use of hydrophobic absorbent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MEPTIPOSRIJEONAMIRAHRIJHGLAPDIYQHERBAYIPKEGKYSELQNPQISISPSESIP +0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . HTTT: THE TELL OF THE CONTROL OF T
                                                                                                                                                                                                                                                                                                                                                    New chimeric proteins containing hyman growth hormone fragment, used particularly for the production of human insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             r match
Local Simitarity 160.0%; Prod. Mo. 1479.
Des 92; Conservative 6; Mismarcher
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geriatric dementia; nervous disorders; human nerve factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TPSNREETQUKSNLELLRISHLIQSWLEPVQ 92
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                                                                                                                                                                                                      (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LIFE
                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 14; Page 30-31; 46pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAP91041 standard; protein, 140 AA
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                                                                                                 98WO-CN00052
                                                                                                                                                   98WO-CN00552
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                                                                                                                                                                                                                                                                                                     WPI; 1999-610839/52
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WO9950302-AI
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                                                    07-007-1999
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                                                                                                                                                                                                                                                        Gan 2;
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Matches
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DB 16; Length 146;

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Ö
                                                                      1 MEPTIPESRIFONAMIRAHREHQLAFDTYQEFEBAYIPKEQKYSFLQNPQTSLSFSESIP 60
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recombinant vector contg. fusion protein - consisting of human growth hormone or deriv. ligated to foreign protein, for stability and high yield.
                                    ;
0
                                  1; Indels
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Score 465; DB 10
Pred. No. 3e-39;
0; Mismatches
                                                                                                                                                61 TPSNREFTOOKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                  AAP90129 standard; protein; 192
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(rirst entry)
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N-PSDB: AAN90269.
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23-AUG-1989
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                                                                                                                                                                                                                                                                                                                                            Sediconce
                                                                                                                                                                                                                                                                                                                                                                  Onery Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human, anti-anglogenic, prolactin; placental lactogen; http://docensis.growth hormone, hGH- hGH-V; capillary endothelial cell proliferation; placental vascularisation; pregnancy; treatment; anglogaic disease; tumour; inhibitor; malignant, anglofibroma; arteriovenous malicramation; arthritis; atherosclerotic plaques; corneal graft neovascularisation; arthritis; atherosclerotic plaques; corneal graft neovascularisation; granulation; glaucoma; ocular, uveitis; fracture; Galor Webor syndrome; psoriasis; fibroplasia; sclerodorma; Raposi's sarcoma; vascular adhesion; que theixemia; reproductive disorder; contraceptive areat; gene therapy; pre-eclampsia; intrautorine growth; relardation; placental dysfunction;
                                                                                                                                                                                                 2. MEDITIPLESRUEDNAMIRAHRINGGARDI YORRERAYI PROGRESSI (M. 1907). HELLI MEDITIPLESI (M. 1907). HELLI MEDITIPLESI (M. 1907). HELLI MEDITIPLESI (M. 1907). HELLI MEDITIPLESI (M. 1907).
                                                                                                                                                                                                                        1 MEPTIPLSREEDNAMLRAHRIHGLAFOTYGEFREAY; PKECKYSFLONPOTSLOFSESTE 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention describes novel human anti-anglocating peptides derived from 10 to 150 consecutive amino acids selected tron the N-terminal end of human placental lactogen (MPL), human growth hormone (MGH), growth
                                                                                                                                                                          Silps ::
                                 The invention consists of a vector contq. a fusion protein which is formed by ligating, downstream of a promotor, nGH or a deriv. (prot. formed by subtstn. of Net-14 With Lou) and a foreign protein. Stability of the vector in the host is greatly increased so the protein yield is higher. (Gpdated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New auti-anglogenic peptides - comprise N-terminal fracments of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human placental lactogen, human growth hormone, growth hormone
                                                                                                                                                  Length 192:
                                                                                                                                                                         Indels
                                                                                                                                                Score 469, 28-16;
Pred. No. 4.28-39;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weiger Rig
                                                                                                                                                                                                                                                                                                                                                                                                                  Human anti-angiogenic peptide hGH Met-1Phe191.
                                                                                                                                                                                                                                                               TPSNREEFOOKSNLELLFISTLIGSWLEPVO 92
                                                                                                                                                                                                                                                  61 TPSNREETQQKSNLELCAISLLCLQSWLEPVQ 92
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                                                                                                                                                                                                                                                                                                                                        AAW92264 standard: Protein; 192 AA
           Disclosure: Fig 1: 19pp; Japanese
                                                                                                                                                Query Match
Best Local Similarity 98.9%;
Matches 91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US09691.
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                                                                                                                         192 AA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-MAY-1997;
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                                                                                                                         Sequence
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requilary endothelial cell proliferation and organisation (ii) inhibit andiogenesis in chick chorioallantoic membrane and (iii) binds to angiogenesis in chick chorioallantoic membrane and (iii) binds to angiogenesis in chick chorioallantoic membrane and (iii) binds to angiogenesis in chick chorioallantoic membrane and (iii) binds to angiogenesis in chick chorioallantoic membrane and (iii) binds to a diagnosing a probable abnormality of placental vascularisation during pregiancy. The peptides can be used for treating an angiogenic disease in calabett, for inhibiting tumour formation or growth in a patient or for medulating vascularisation of a patient's placenta. In particular, the peptides can be used for treating e.g. malignal tumours, arithmics an arthritic such as rheumatoid arthritis, atheroselerotic plaques, corneal graft neovascularisation, arthritis, atheroselerotic plaques, corneal graft neovascularisation, cellayed wound bealthy, proliferative retinopathy such as those occurring to retinopathy, macuiar degeneration, granulations such as those occurring such as hyportrophic scars or keloid scars, neovascular glaucoma, ocular function underline, moritar of fractures, osler-wheor systorome, psorfassis, progetic qlaucoma. Theromal transmissions, chronic varicose ulcers, sand cherocoma. They can also be used as contrareptive agents on the used in quel provels of Niterminal fragments of hdir hdrive and underlined associated with pro-equancial levels of Niterminal fragments of hdir hdrive and placental cannel growth retardation, and placental dysinant of vascular development associated with pro-equancient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MFPTIPLSRIFONAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hormone variant (hGH-V), or human prolactin. Such peptides (i) inhibit
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98.9%; Pred. No. 4.2e-39;
Lve. 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human merve growth factor; fusion protein; thrombin; qeriatric dementia; nervous disorders; human growth bormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 IPSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAP91299 standard; protein; 261 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89EP-0102795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88JP-0035042.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1..140
141..143
144..251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TOYJ ) TOSOH CURP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 91; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7-FEB-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-FEB-1986;
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                                                                                                                     1 MFPTIPLSKLFDNAMLRAHRLHQLAFDTYQEFFRAYIPKEGKYSFLONPQTSLSFSESIP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The protein is produced by fusing DNA encoding BDF (IL-) with DNA encoding BSF-2 (IL-5) and ligating the product into an expression vector See also AAR05311 and AAR05313.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MEPTIPLSRLFDNAMERAHRIHQLAFDTYQEFEEAYIPKEQKYSFLONPQTSLSFSESIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                B-cell stimulatory factor-2; interleukin-6; B-cell differentiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prepn. of humar B-cell differentiation factor - from specified sequence segment, by recombinant DNA technique, gives protein o specified amino acid sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.9%; Score 465; DB 11; Length 310; 98.9%; Pred. No. 7.3e-39;
                            Length 262;
                                                                                                                                                                                                                                                                                                                                                                                              Fusion protein of B-cell stimulatory factor-2 and B-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                              Score 465; DB 12;
Pred. No. 6e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92
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                                                                                                                                                                                       61 TPSNREETQQKSNLHLLKISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ä
                                                                                                                                                                                                                                                                                            AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR05313 standard; protein; 144
                                                                                                                                                                                                                                                                                           AAR03255 standard; protein; 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                interleukin-5; fusion protein.
                                98.98;
98.98;
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                                                                                                                                                                                                                                                                                                                                                               (first entry)
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                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                differentiation factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1990-062207/09.
N-PSDB; AAQ02028.
                                              Local Similarity
nes 91: Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TOYJ ) TOSOH CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
262 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       310 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUL-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP02013375-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JJL-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-JAN-1990.
                                                                                                                                                                                                                                                                                                                                                             19-351,-1990
                                                                                                                                                                                                                                                                                                                             AAR03255;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
best Local &
aptionbag
                                  CLETY Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         datches
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                                                                  Matches
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ID AARC
XX
                                                                                                                                                                                                                                                          RESULT 9
                                                                                                                                                                                                                                                                            AAR03255
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                                                                                                                                                                                                      8
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                                                                                                                                                         N-terminal end (1st region), a 3 amino acid sequence representing thrombin recognition site, and binner beta nerve growth factor (beta-N3F) at the C-terminal. Beta-N3F can be used to control geriatric describe and other nervous disorders, and can be released from the fusion protein by incubation with thrombin (see AAN90577-8, AAP91034).
                                                                                                                                                                                                                                                                                                                                                                                              1 MPPTIPLSRLFONAMLRAHRIHQLAPDIYQEFEEAYIPKEQKYSFUQNPQTSLSFSESIP 60
                                                                                                                                                                                                                                                                                                                                                                                                                 A recombinant human nerve growth factor beta subunit-contg. protein can be produced as this fusion protein. It is purified by contacting a gel having a cation exchange gp. with the fusion protein, in the presence of urea. The purified protein is useful in a medicament for treating disorders of the nervous system, cg dementia.

(Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                               Saps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Purifica, of human neuron growth factor beta-subunit-contg, prurein by contacting with gel having cation exchante gp. in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human growth hormone/human merve growth factor beta fusion protein
                                                New human nerve growth lactor gene encoding inston protein inhaving cleavage site for thrombin, useful for treating geniatric
                                                                                                                                                                                                                                                                                                                                                               Ċ
                                                                                                                                                                                                                                                                                                                             Score 465: DB 10; Length 261;
Pred. No. 6e-39:
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                     Fusion protein consisting of human growth hormone at the
                                                                                                                                                                                                                                                                                                                                                               61 TPSNREETQQKSNLELLRISLLIOSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6) TPSNRRELGORSNLELLRISLLLIGSWLEPVO 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hGH; hNGF; nervous system diseases; dementia
                                                                                                                                                                                                                                                                                                                                                               C; Mismatches
                                                                                                                     Claim 36; page 31-32; 38pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAR11740 standard: Protein; 262 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure ; fig 1; 7pp; Japanese.
                                                                                                                                                                                                                                                                                                                           98.98;
98.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89JP-0202835
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(first entry)
                                                                                                                                                                                                                                                                                                                                                             91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI: 1991-128768/18.
              1989-243392/34
                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TOYJ ) TOSOH CORP.
                                                                                                                                                                                                                                                                                            261 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAQ11578.
                                                                                      dementia, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP03067598-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-AUG-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-AUG-1989;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-JUN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR11740:
                                                                                                                                                                                                                                                                                              Seguence
                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                               Matches
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Conservative
                                                                                                                             Cuery Match
Best Local Similarity
Tombos 90; Conserva
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N-PSDB; AANB1605.
                       WPI; 1986-281696/43
                                                                                                                      Sequence 262 AA;
        (CTSU/) OTSUKA E.
                                                                                                                                                                                                                                                                                                                      Grewth hormone
                                                                                                                                                                                                                                                                                                                                                   JP63167798-A
                                                                                                                                                                                                                                                                                                                                                                                29~DEC-1986;
                                                                                                                                                                                                                                                                                                                                                                                               29 - DEC - 1986;
                                                                                                                                                                                                                                                                                25-MAR-2003
20-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                  11-JJL-1988
                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                  AAP81226
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                                                                                                                                                                                                                    The sequence encoding this protein can be fiscal with DNA encoding B will differentiation factor (ii-6) and ingated into an expression vector for producing a tusion protein.

See also AARSSII.
                                                                                                                                                                                                                                                                                                      1 MFPTIPLSRLFDNAMLRAHRIHQLAFDTYQEFERAYIPKEQXXSFLONFQTSLSFSFS1F 60
                                                                                                                                                                                                                                                                                                               Gans
                                                                                                                                                                        Preph. of human H-cell differentiation tactor—from specified INA sequence segment, by reconstrant DNA technique, gives protein of specified amino acid sequence.
                                                                                                                                                                                                                                                                         Jength 144;
                                                                                                                                                                                                                                                                                        1; indels
                                                                                                                                                                                                                                                                        Score 462; DB 11;
Pred, No. 6.1e:39;
                              Segment of B-cell stimulatory factor-2 (IL-5).
                                                                                                                                                                                                                                                                                                                                    61 IPSNREBIJORSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                            Human beta-nerve growth factor gene product
                                            B-cell stimulatory factor-2: interleukin-5.
                                                                                                                                                                                                                                                                                       : Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
145..262
                                                                                                                                                                                                      Disclosure, Page 9, 17pp, Japanese
                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                        98.3%;
97.8%;
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                                                                                                        88.3P~0162555.
                                                                                                                     38JF-016255 ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85JP-0045773.
                                                                                                                                                                                                                                                                                                                                                                                       AAP61033 standard; Protein;
               19-JUL-1990 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                       Ouery Match
Best Local Similarity 97.8
Matches 90, Conservative
                                                                                                                                                   1990-062207/09.
                                                                                                                                    (TOYS ) TOSCH CORP.
                                                                                                                                                                                                                                                          144 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beta-NGF; E.coli;
                                                                                                                                                          N-PSDB; AAQ02028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JP61205485-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-1985;
                                                                         JP02013375-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-MAR-1985;
                                                            Homo sapiens
                                                                                                                     01-JUL-1988;
                                                                                                       01-JUL-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                        17-JAN-1990
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                                                                                                                                                                                                                                                          Sequence
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AARC5313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein
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1D AAP6
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
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The polypeptide (AAPB1226) with somatomedin-like activity and the DNA (AANB1605) encoding it are claimed. A Met resicual qp. may be added to the N-terminal. The polypeptide acts on the hone structure of mammals, including humans, to promote bone growth. The polypeptide has high production rate and is casily extracted from botterial culture medium and refined for use as a bone growth accelerator. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                            The protein is a direct translation of the upstream tryptophan promoter-operator lacking its attenuation sequence and human abderance squence. The product may be efficiently expressed from a transformed E.coli expression system.
                                                                                                                                                                                                                                                                                                                                                                                                           ..
jc
                                                                                                                                                                                                                                                                                                                                                       Length 252;
- used in prodm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Polypoptide with somatomedin-like activity - by culturing bacterium transformed by plasmid contg. sequent with specified DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence of protein with somatomedin-like activity.
                                                                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                 98.3%; Score 462; DB 7; 97.9%; Pred. No. 1.2e-38; ative 1; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene segment of human nerve growth factor - NGF-producing recombinant Escherichia strain
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                                                                           Claim 32: Page 482: 71pp; Japaneso.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP81226 standard: protein; 138 AA.
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(first entry)
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administered substance from a naturally-occurring endogenous substance from a naturally-occurring endogenous substance the exogenous substance being tagged so that it fluoresces differently from the endogenous one at a suitable wavelength. The tagging may consist of one or more substitutions in tagged growth hormone selected from 340V, 52V, w86F, Y, L, I or V FIGTY or 113TY. The method is used to distinguish between exogenously administered substances as compared to naturally-occurring endogenous substances. Especially mentoned is the integral manuals e.g. cattle. The present sequence represents mainly be used to the contract of the present of the contract of th
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                                                                                                                                                                                                                                   Getection; [luoresce: illegal misuse; growth substance; athlete; domesticated farm animal; cattle; human growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; 22kDa growth hormone; hGH; mutant; thrombin; resistance;
                                                                                                                                                              Frimary amine acid sequence of native human growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 97.9%; Score 460; DB 20; Local Similarity 98.9%; Pred. No. 1.3e-38; es 90; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62 PSNREETQOKSNIELLRISHLLIQSWLEPVQ 92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Fig 1; 38pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GENE-) GENERIC BIOLOGICALS LID.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the method or the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-GH03449
                                                                                     (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Atkinson A, Murphy JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    plasmin; decomposition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-338072/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :91 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6-NCV-1998;
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                                                                                                                                                                                                                           The invention relates to a secum albumin-growth hormose fusion professionals secunity treat growth hormose related diseases such as Down's syndrom. This sequence represents a protein of the serum albumin-growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Serum albumin-growth hormone fusion protein - useful to treat growth hormone related diseases, e.g. Down's syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97.9%: Score 460: DB 19: length 191: 98:9%: Pred, No. 1.36:38: 1.7de.s. ive 0: Mismatches 1: Indexs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Serum albumin-growth hormone fusion protein; growth hormone:
                                                                         Score 460; DK 9; Length 136;
Fred. No. 9.4e-39;
0; Mismatches [: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indeas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein sequence of the hGH growth hormone cDNA.
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                                                                     Cuery Match
Best Local Similarity 98,98,
Matches 90, Conservative
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Indels

AAY15809 ID AAY1

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Length 191;

06-APR-1999

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97JP-0275277
             97JF-0275277
                   (SUMU ) SUMITOMO SEIYAKU KK
                         WPI; 1999-283567/24
        22-SEP-1997;
             22-SEP-1997;
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The present invention describes a human arowth housone mitten, is which the 134th Arg and the 135th Thr are replaced respectively by Asp and Brothn the 181s to the 191st amino acid sequence in faural type human 22 king growth hormone (fidi) and which has a resistance dealist decomposition by thrombin. The present sequence represents the vatural EGH. Also and the 140th Lys are replaced respectively by Asp. Pro and A.a in the amino acid sequence of matural type NGH and which has a resistance against decomposition by thrombin and plasmin and (2) a drap preparation containing the above HGM mutant as the active composition the motivation defined and shows a high stability in blood and tools finid. A human growth hormone mutant - with equivalent activity to natital human growth hormone Example 1: Page 5:6: 10pp: Japanese

191 AA: Seguence

50 e 50 fidels 0: 97.9%; Score 460; DB 20; Tength 150; 98.9%; Pred. No. 1.3c-38; Jve. C. Mismatches 1; Indels ( Ouery Match Best Local Similarity 98.9 Matches 90, Conservative qq ò

Search completed: September 15, 2003, 12:00:57 Job time: 65.6308 secs

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RESULT 1
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184.449 Million cell updates/sec
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                                                                                                                                                                                                                                                                                       September 15, 2003, Il:57:40 ; Search time 21,1933 Segonds
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Sequence 11.
Sequence 11.
Sequence 12.
Sequence 17.
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/cgn2_6/ptodata/1/iaa/pdata/1cs1.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compuger 2014.
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US-09-420-819-37
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US-08-800-2:50-18
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0S-09-284-878-1
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US-08-459-486-51
US-08-459-658-51
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Gapop 10.0 , Gapext 0.5
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Sequence 1, Appli	35-07-922-523-1		1.91	63.7	299.5	i.
Sequence 3, Appli	US-C7-963-331D-3	-	∴	63.7	299.5	44
Sequence 3, Appli	US-09-105-651-3	7	215	64.1	301.5	43
Sequence 1, Appli	US-08-459-906-1	'n	193	64.1	301.5	42
Seguence 1, Appli	US-08-383-621-1	7	193	64.1	301.5	<b>1</b>
5,	US-08-363-982-2	7	193	64.1	301.5	0.4
Seguence 2, App	US-67-621-197C-2	1	55.	64.1	301.5	5 8
'n.	5210180-1	ی	<u>.</u>	64.1	301.5	38
	US-09-277-720-2	•.•	190	64.1	301.5	3.7
	US-08-388-267C-2	<b>-</b>	190	64.1	301.5	36
Sequence 1, Appl:	US-09-105-651-1	7	216	64.4	302.5	35
4	US-07-963-331D-4	,-ı	1.5	64.8	304.5	34
Sequence 8, Appli	US-08-458-824-8	7	131	65.2	306.5	33
Seguence 5, Appli	US-09-411-657-5	7	198	71.0	333.5	<b>?</b> 5
Sequence 5, Appli	US-08-71C-324A-5	2	198	7	\$33.5	, (2)
Sequence 5, Appli	US-08-187-756C-5	7	198	0	3.53.5	0.0
Patent No. 54241	5424199-3	9	168	72.3	340	5.7
Sequence 2, Appli	US-08-990-774-2	7	175	76.4	\$58.5	28

## ALIGNMENTS

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US-08-093-389-1

Sequence 1 Application US/08093883

Patient No. 5499529

GENERAL INFORMATION

FAPLICAN: Heyneker, Herbert L.

APPLICAN: Such San Branco Blvd

COMPUTER READALE FORM:

APPLICAN: Date Date Date San Branch Bran
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APPLICANT: Datey, Michael J.
APPLICANT: Buckwaiter, Brian L.
APPLICANT: Buckwaiter, Brian L.
APPLICANT: Cady, Susan M.
APPLICANT: Shich, Hong-Ming
APPLICANT: Bohlen, Peter
31TLE OF INVENTION: Stabilization of Somatotropins and Other
TITLE OF INVENTION: Proteins by Modification of Cysteine Residues
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97.9%; Score 460; DB 2; Length 194;
98.9%; Pred. No. 6.1e-51;
Live C; Mismatches I; Indels
                                                                  COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Partenin Release #1.0, Version #1.25
CURRAL APPLICATION DATA:
APPLICATION NUMBER: US/08/385,621
FILING DATE: C6-FEB-1995
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0; Mismatches
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PROCK APPLICATION DATA:
APPLICATION NUMBER: 08 07/766,142
FILINS DATE: 25-5EP-1991
ATTCRNBY/AGEN: 1NEORMATION:
NAME: TSCAPOS, SECHE U.
RECISTRATION NUMBER: 31,278-01
FILEDROUS, CASTON DATE: 31,278-01
TELECHONE: 203-321-297
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STREET: one Cyanamid Plaza
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CPERATING SYSTEM: PC-DOS/MS-DOS
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patent No. 6010999
                                  MEDIUM TYPE: Floppy disk COMPUTER: 18M PC compatible
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FILING DATE: C2-JUN-1995
CLASSIFICATION: 514
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amino acid
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Matches 90; Conservative
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LENGTH: 194 amino acid
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      COMPUTER READABLE FORM:
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FRY: U.S.A.
07470-8426
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APPLICANT: Saldana, Hugo Barrera
APPLICANTON: Genetically Modified Methylourophic P. pastoris Veast for CITLE OF INVENTION: Genetically Modified Methylourophic Product.on and Secretion of the Buran Growth. Hormone
FILE REFERENCE: 1825.00100.0
CORRENT APPLICATION NUMBER: US/09/284,878
PRIOR PILING DATE: 1999-07-12
PRIOR FILING DATE: 1997-10-34
                                                                                                                                                                                                                                      1 MEPTIPLSRIFONAMLRABRIHQLAFDTYOBFBBAYIPKEGKYSFLQNPQTSLSFSESIP 60
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TILLE OF INVENTION: Stabilization Of Somatotropins And Other
TILLE OF INVENTION: Proteins By Modification of Cysteine Residues
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                                                                                                            Length 1927
                                                                                                                                                                           1; ludels
                                                                                                        Score 465: DB 1:
Pred. No. 1.4e-51;
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1937 West Main Street, P.O. Box 60
                                                                                                                                                                                                                                                                                                                                                                           61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                              61 PSNREETQQKSNLFLLTQSWLEPVO 91
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                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
US-09-284-978-5
US-09-284-978-5
Sequence 5, Application US/09264878
Patent No. 6342375
GENERAL INFORMATION: Marked Greater
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Patent No. 5951972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APFILCANT: Dalcy, Michael J.
APPLICANT: Guckwaller, Brian L.
APPLICANT: Gady, Susan M.
APPLICANT: Shieb, Hong-Ming
APPLICANT: Boblen, Peter
                                                                                                     86.86
88.88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patentin Ver. 2.1
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Best Local Similarity 98.9%
Thea 90; Conservative
                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1997-1
NUMBER OF SEQ ID NOS: 9
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CORRESPONDENCE ADDRESS:
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ORGANISM: Homo sapiens
US-09-284-878-5
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STATE: Connecticut
                                                                                          Query Match
Best Local Similarity
Matches 91: Conserv
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06904-0060
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STREET: 19
TOPCLOGY:
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SEQ ID NO 5
LENGTH: 191
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APPLICANT: Halban, Philippe A.
APPLICANT: Halban, Philippe A.
APPLICANT: Clark, Samuel A.
APPLICANT: Clark, Samuel A.
APPLICANT: Thigpen, Anice E.
APPLICANT: Thigpen, Anice E.
APPLICANT: McGarry, Dennis
APPLICANT: McGarry, Dennis
TITLE OF INVENTION: RECOMBINANT EXPRESSION OF PROTEINS FROM NUMBER OF SEQUENCES: 79
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                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk COMPUTER: IRM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
      Pred. No. 7.1e-51;
                                                                                                                                                                                                                                                                 HILL HILL HILLS HILLS HILLS SWLEPVO 117
98.9%; Pred. No.
                                                                                                                                                                                                                             62 PSNREFTOOKSNIELLRISLLLIQSWLEPVQ 92
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PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
FILING DATE: 15-OCT-1996
PRIOR APPLICATION NUMBER: US 68/589,028
FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NOMBER: US/08/784,582
FILING DATE: Concurrently Herewith
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REFERENCE/JOCKET NUMBER: UTSD:514
TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Arnold, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                    10, Application US/08784582
0. 6110707
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amino acid
   Best Local Similarity 98.9%
Matches 90; Conservative
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Matches 90; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 7
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US-08-784-582-10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
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Patent No.
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APPLICANT: Ouade, Christian
APPLICANT: Ouade, Christian
APPLICANT: Kruse, Fred
TITLE OF INVENTION: Recordinant Expression of Proteins From
TITLE OF INVENTION: Secretory Coll Lines
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS: 50
ADDRESSEE: Arnold, White & Durkee
STREET: P. O. Box 4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97.9%; Score 460; DB 3; Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                97.9%; Score 460; DS 3; Longth 194;
98.9%; Pred, No. 6.1e-51;
Live 0; Mismatches 1; Indels
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COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-10.5/MS-DOS
SOFTWARE: PatentIn Release 41.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/68/589.028
FILING DATE: Concurrently Herewith
CLASSIFICATION: 436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Bighlander, Steven D.
REGISTRATION NUMBER: 47.612
REFERENCE/DOCKET NUMBER: LISE:426/HYL
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Newgard, Christopher B.
APPLICANT: Halban, Philippe
APPLICANT: No. 6687129mington, Karl D.
APPLICANT: Clark, Samuel A.
                          REFERENCE/DOCKET NUMBER: 31.278-03
TELECOMMUNICATION INFORMATION:
TELEFHONE: 201-831-3247
TELEFAX: 201-831-3305
INFORMATION FOR SEQ 10 NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 16, Application US/08589028 Patent No. 6087129
REGISTRATION NUMBER: 34,276
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 77210-4433
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                      LENGIH: 194 amino acids
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amino acid
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Best Local Similarity 98.39
Matches 90; Conservative
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                                                                                                                                                                                                                                                          amino acid
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TIV: Houston
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US-08-589-028-10
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2 FPTIPLSKLFDNAMLRAHRLHQLAFOTYQEFFERYIPKEQKYSFLQNPQTSLSFSESIPT 61
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  APPLICANT: ROCK, Fernando I..
APPLICANT: Bazan, J. Fernando
APPLICANT: Rastelein, Robert, A.
TILLE CF INVENTION MUTATIONAL VARIANTS OF MAMMIJAN PROTEINS
NÜMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 217;
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96.9%; Pred. No. 7.1e-51;
Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: 192..210
OTHER INFORMATION: /note= "The peptides above are
OTHER INFORMATION: depicted in Figure 1"
                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
CORRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Rclease #1.0. Version #1.30
CURRATI APPLICATION DATA:
APPLICATION NUMBER: US/09/759,628
FILING DATE: US-DEC-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PROR APPLICATION: 435
APPLICATION: 678
FILING DATE: 06-DEC-1995
ATTORNEY/AGENT INFORMATION:
NAME: Chicq. Edwin P.
REGISTRATION NUMBER: 34,090
                                                                                                                                                                          ADDRESSE: DNAX Research Institute
STREET: 901 California Avenue
CITY: Palo Aito
SIATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Olazaran, Martha Guerrero
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7 Sequence 1, Application US/09284878
Fatent No. 6342375
GEMERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: DOTELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IELEPANE: 415-892-9196
TELEFAX: 415-496-1200
TELEFAX: 615-496-1200
SUDUENCE CHARACTERISTICS:
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Best Local Similarity 96.99
Matches 90; Conservative
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PEATURE:
                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptido
133..153
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32..53
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38-08-759-628-11
                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTHE
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                                                                                                                                                                                                                                                                        APPLICANT: Newgard, Christopher H.
APPLICANT: Raiban, Philippe A.
APPLICANT: Raiban, Philippe A.
APPLICANT: Clark, Samuel A.
APPLICANT: Clark, Samuel A.
APPLICANT: Thippen, Anice E.
APPLICANT: Thippen, Christ, an
APPLICANT: Kruse, Fred
TITLE OF INVENTION: RECCMMINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CBLL LINES
CORRESPONDENCE: 56
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97.9%; Score 460; DB 3; Jenuth 217; 98.9%; Pred, No. 7.1e-51;
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                          62 PSNREETQQRSNLELLRISTLLIQSWLEPVQ 92
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lBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                           Sequence 10, Application US/33785271 Patent No. 6194176
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; Patent No. 6225446
; GENERAL INFORMATION:
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90; Conserv
                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Newgard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Texas
COUNTRY: USA
ZIP: 77210
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CIIY: HO
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Best Local Si
Matches 90,
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GENERAL INCORACTION:
APPLICANI: Sato, Setji
APPLICANI: Sato, Setji
APPLICANI: Sato, Setji
APPLICANI: Ridashivituki
APPLICANI: Kudo, Toshiyuki
APPLICANI: Kudo, Toshiyuki
APPLICANI: Kondo, Masaaki
TITLE OF INVENTION: DREPARING USEFUL POLYPEPTIDES IHROUGH EXPRESSION OF THE
TITLE OF INVENTION: DRAS
FILE REFERENCE: 382-1026
CURRENT APPLICATION NUMBER: US/09/286,036A
CURRENT APPLICATION NUMBER: JP10-87339/1998
EARLIER FILING DAFE: 1998-03-26
EARLIER FILING DAFE: 1998-03-16
NUMBER: Patentin Vor. 2.0
                                    <u>-</u>19
             2 PPTIPLSRLFDNAMLRAHRAHRAHRAHDINGEFEERYIPKEQKYSFLQNPQTSLSFSESIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYOEFEEAYJPKEQKYSFLQNPQTSLSFSESIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: Designated is OTHER INFORMATION: an amino acid sequence of MWPsp-MWPmp20-TEV-G-GH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: New John Philippe A. APPLICANT: New John Philippe A. APPLICANT: No. 5110707mington, Karl D. APPLICANT: Clark, Samuel A. APPLICANT: Thippen, Anice E. APPLICANT: Thippen, Anice E. APPLICANT: Ouasde, Christian APPLICANT: Wester, Dennis APPLICANT: McGarry, Dennis TITLE OF INVENTION: SECRETORY CELL LINES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97.9%; Score 460; DB 4; Length 245; 98.9%; Pred. No. 8.4e-51; Indels Live 0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                     Segmence 66, Application US/09280030A
Faten: No. 6506595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 71, Application US/08784582 Patent No. 5110707
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Best Local Similarity
Matches 90, Conserv
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ZIP: 77210
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US-08-784-582-71
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LENGTH: 245
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APPLICANT: Saldata, Hugo Earreta
APPLICANT: Saldata, Hugo Earreta
APPLICANT: Salvado, Jose Maria Viador
TITLE OF INVENTION: Genetically Modified Methylotrephic E, pastoris Noas, for the
TITLE OF INVENTION: Genetically Modified Methylotrephic E, pastoris Noas, for the
FILE REPERBACE: 1829 0010000
CURRENT APPLICATION NUMBER: US/09/284,878
CURRENT FILMS DATE: 1999-67-21
PRIOR PRIOR FILMS DATE: 1997-10-24
NUMBER OF FILMS DATE: 1997-10-24
NUMBER OF SEC 1D NOS: 9
SOFTMARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEONG Baik-Lin
INVENTION: Process for preparing recombinant procedus using highly
efficient expression vector from Sucharcmyces cerevisiae
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                                                                                                                                                                                                                                                                                                                                                                                 Longth 217;
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MEDIUM TYPE: Disherte, 3.5 inch. 1.44 Mb storage
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                                                                                                                                                                                                                                                                                                                                                                                 Score 460; DB 4:
Pred. Nc. 7.1e-51;
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CORRESPONDING ADDRESS: MADORESEE: MACHINAN 5 TAPOINTE, P.C.
STREET: SHILE 1201, 900 Chapel Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 25, Application US/09424620B Patent No. 6391884 GENERAL INDERVATION: GENERAL INDERVATION: APPLICANT: HANIL SYNCHETIC FIBER CO., .;D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F. HILLT HILLSHILLTILL HILL HILL ST. PSNREETGQKSNLELLRISLLLLQSWLEPVQ 117
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APPLICATION NUMBER: US/09/424,6258
FPILING DATE: 24-43, 6791585-1999
INFORMATION FOR SEQ 1D NG: 25:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 PSNRRETQQKSNLELLRISLLLLQSWLEPV0 92
                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
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OPERATING SYSTEM WINDOWS 95/98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38008NCE DESCRIPTION: SEC ID NC: 25: US-09-424-6208-25
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YANG, Doo-Suk
LEE, Jee-Won
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOON, Jae-Woong
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: New Haven
STATE: Connecticut
COUNTRY: U.S.A.
ZIP: 06516-2802
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98.9%;
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MOLECULE TYPE: PROTEIN
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                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 98.9
Matches 90; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 98.9
Matches 90; Conservative
                                                                                                                                                                                                                                                                                         IYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
US-09-424-620B-25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QQ
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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1HHISSHIPLSRLEDWAMLRAGRAFDTYQEPSEAYIPKEQKYSELQNPQSSLOFSESIES 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INCORMATION:
APPLICANT: Newcard, Christopher B.
APPLICANT: Newcard, Philippe A.
APPLICANT: No. 6110707mington, Karl D.
APPLICANT: Clark, Samuel A.
APPLICANT: Clark, Samuel A.
APPLICANT: Clark, Samuel A.
APPLICANT: Quade, Christian
APPLICANT: McGarry, Decnis
TITLE OF INVENTION: RECOMBINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CELL LINES
NUMBER OF SEQUENCES: 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sength 274
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CPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Vorsion #1.30
CURRENT APPLICATION DATA:
                                                                            SOFTWARE: Patentin Release #1.6, Version #1.50
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/28/784,582
FILING DATE: Concurrently Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 98.9%; Pred. No. 9.9e-51;
Matches 90; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62 PSNREETQQKSNLELLRRSLLLLTQSWLEPVQ 92
                                                                                                                                                                  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 50/028,427
FILING CATE: 15/0CT-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 28/589,028
FILING DATE: 19.744-1995
ATTORNY/ACBNT INFORMATION:
NAME: Highlander, Stevel L.
                                                                                                                                                                                                                                                                                                                                           NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37,642
REPERBANEZ/DOCKET NUMBER: UTSD:514
TELECOMMUNICATION INFORMATION:
TELEPAX: 512/474-7577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee STREET: P.O. Box 4433
CITY: Houston STATE: Texas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/784,582
                                                                 PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 73, Application US/03784582
Patent No. 6110707
                    Eloppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INPORMATION FOR SEO ID NO: 71:
SEQUENCE CHARACTERISTICS:
LENGIH: 274 amigo acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
               MEDIUM TYPE: Flopi
CCMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
STRANDEDNESS:
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US-08-784-582-71
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ZIP: 77210
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APPLICATT: CHAPPEL, Scott
TITLE OF INVENTION: Human Growth Hormone to stimulate hematopoiesis and immune
TITLE OF INVENTION: Human Growth Hormone to stimulate hematopoiesis and immune
FILE REFERENCE: CHAPPRI=6.
CURRENT APPLICATION NUMBER: US/09/465,461
PRIOR APPLICATION NUMBER: 60/112.668
PRIOR APPLICATION NUMBER: 60/112.668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : FPTIPLSRLFDNASLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLCFSESIPT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 FPTIPLSRLFDNAMLKAHRLFQLAFDTYQFFEEAYIPKEQKYSFLONPOTSLSFSESIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
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o
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97.9%; Score 460; DB 3; L
98.9%; Pred, No. 1.46-50;
tive 0; Mismatches 1;
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Pred, No. 3.5e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11:1111 | 1111:1 | 1111:1 | 1111:1 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 1388 | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 PSNREETQQKSNLELLRISILLIGSWLEPVQ 92
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                                                                  PROGRAPHICATION DATA:
PROGRAPHICATION NUMBER: US 60/028.427
PILING DATE: 15-0CT-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/589,028
FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                             NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37,642
REFRENCE/DOCKET NUMBER: UTSD.514
TELEPHONE: 512/418-3003
TELEPHONE: 512/418-3003
TELEPHONE: 512/418-3003
TELEPHONE: 512/418-3003
TELEPHONE: 512/418-3003
TELEPHONE: 512/418-3003
LENGMATION FOR SEQ 10 NO: 73: SEQUENCE CHARACTERISICS:
Concurrently Herewith
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Patent No. 634844
: GENERAL INFORMATION:
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Best Local Similarity 97.8
Matches 89; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin ver
SEC ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 90: Conserv
                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : TOPOLOGY:
US-08-784-582-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-187-756C-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
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US-09-465-461-1
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Query Match
Best Local Similarity 97.8%: Pred. No. 4.26-50:
Matches 89; Conservative 6; Mismatches 2: Indels 6; Gaps
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: ROSEN, ET AL.
TITLE OF INVENTION: Himman Growth Hormone
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLIAN,
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLIAN,
STREET: 6 RECKER FARM R.A.D.
CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: CSA
                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUK TYPE: 3.5 INCH DISKETTE
CCMPUTER: 18 PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/187/756C
ILING DATE: January 27, 1994
CLASSIPICATION DATA:
APPLICATION NUMBER: 18 SPRIOR APPLICATION NUMBER: EILNG DATE: ATORNATION:
HEALT OF STATE: HORDWARTION:
HEALT OF STATE: HORDWARTION:
TELEPHORE: 201-994-170
SECONMUNICATION NUMBER: 325800-55
TELEPHORE: 201-994-170
SECONMUNICATION NUMBER: 325800-55
TELEPHORE: 201-994-170
SECONMUNICATION NUMBER: 325800-55
TELEPHORE: 201-994-170
SECONMUNICATION OF 4:
SECONMUNICATION OF 4:
SECONMUNICATION OF 4:
SECONMUNICATION OF 4:
SECONMUNICATION OF 5:
TYPE: AMINO ACID
STRANDEDNESS:
TOPOLOGY: LINBAR
NO.68-187-756C-4
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Search completed: September 15, 2003, 12:05:31 Job time: 22:1039 secs

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Sequence 2, Apr. 1, Sequence 2, Apr. 1, Sequence 2, Apr. 1, Sequence 2, Apr. 1, Sequence 1, Apr. 1, Sequence 0, Apr. 1, Sequence 0, Apr. 1, Sequence 0, Apr. 1, Sequence 2, Apr. 1, Sequence 2, Apr. 1, Sequence 3, Apr. 1, Ap
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                                                                                                                                                                       September 15, 2063, 12:03:35 ; Search time ab.5905 Seconds (without allocmores) 947.945 Millor coll up bates/see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater this or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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470
1 MEPT PLASRZEDNAMJRAHR........NI BILLSTSILLIGSMILES VO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1: Cgg2_6/ptodata/1/pubpaa/USG7_PUBCOMB.pep: *
2: Cggn2_6/ptodata/1/pubpaa/USG7_PUBCOMB.pep: *
3: Cggn2_6/ptodata/1/pubpaa/SG6_MNR_PUB.pep: *
4: Cgn2_6/ptodata/1/pubpaa/USG6_PUBCOMB.pep: *
5: Cggn2_6/ptodata/1/pubpaa/USG3_NRW_PUB.pep: *
6: Cgn2_6/ptodata/1/pubpaa/USG3_NRW_PUB.pep: *
7: Cgn2_6/ptodata/1/pubpaa/USG3_NRW_PUB.pep: *
8: CGn2_6/ptodata/1/pubpaa/USG3_NRW_PUB.pep: *
9: CGn2_6/ptodata/1/pubpaa/USG3_NRW_PUB.pep: *
10: Cgn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
11: Cgn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
12: Cgn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
13: CGn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
13: CGn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
13: CGn2_6/ptodata/1/pubpaa/USG9_NRW_PUB.pep: *
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/cgn2_6/ptodata/i/pubpaa/iSi0C_PUSTCOM6.pep:+
/cgn2_6/ptodata/i/pubpaa/iSi0C_NEW.FFH.pep:+
/cgn2_6/ptodata/i/pubpaa/iSi0_NEW_FFH.pep:+
/cgn2_6/ptodata/i/pubpaa/iSi0_NEW_FFH.pep:+
Gendere version 5.1.6 copyright (c) 1993 2603 compugen 156.
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US-09-853-688-4
US-09-824-200-12
US-09-850-887-3
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108-10-054-073-7

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108-10-153-207-1

208-10-10-133-207-1

208-10-10-123-207-1

208-10-10-123-207-1

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US-09-853-688-2
US-09-969-748C-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541936 seqs, 143912426 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Published_Applications_AA:*
                                                                                                                       OM protein - protein search, using swingel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Match Length DB
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scarched:
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                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Result
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Sequence 25, App. 18 Sequence 11, App. Sequence 19, Appl. Sequence 19, Appl. Sequence 19, Appl. Sequence 10, Appl. Sequence 11, Appl. Sequence 27, Appl. Sequence 29, Appl. Sequence 20, Appl. Sequence 20, Appl.	g an ike Sequence LLLP cor #1.30
2 US-10-043-497-350 2 US-10-153-207-2 5 US-10-153-207-2 5 US-10-168-246-16 5 US-10-168-246-16 5 US-10-153-207-3 4 US-10-153-207-3 4 US-10-101-873-16 5 US-10-101-879-10 5 US-10-043-487-337-308-32 5 US-10-140-293-27 5 US-10-140-293-27 5 US-10-140-293-27 5 US-10-140-293-27 5 US-10-140-293-27 6 US-10-140-293-28 6 US-10-140-293-28 7 US-10-140-293-19 8 US-10-140-293-18 9 US-10-140-293-19 9 US-10-140-293-19	ALIGNMENTS  873  ric Protein Containin molecular Chaperone-L and Townsend and Crew ero Center, Bighth Fl eroS/MS-DOS elease #1.6, Version US/10/054,873 US/1
	Application US/10054873 No. US202016472A1 No. US202016472A1 No. US202016472A1 No. US202016472A1 CANT. Gan, Zhong Ru CANT. Gan, Zhong Ru SPONDENCE ADDRESSE: Townsend and SIREET: Two Embarcadero CITY: San Francisco CUNTRY: San Francisco CUNTRY: San Francisco CUNTRY: San Francisco COUNTRY: DAA THER READABLE FORM: MEDIUM TYPE: FICEPBY dis COMPITER: ELGEBY dis COMPITER: LIMP PC COMPA OPERATING SYSTEM: EC-DO SOFTWARE: BatchIn Relec NT APPLICATION DAIA: APPLICATION DAIA: APPLICATION NUMBER: US FILING DATE: 11-DEC-200; CLASSIFICATION NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW STORM NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW STORM NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW STORM NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW STORM NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW STORM NUMBER: US FILING DATE: 11-DEC-200; NAME: WYCTOFL, FYANC, US NEW SEQ ID NO: 2: NOTE CHARACTERISTICS:
2.000.000.000.000.000.000.000.000.000.0	HESULT 1  Sequence 2. Appilication US/10  PULLICATION NO. US2020164712  PULLICATION NO. US2020164712  APPLICANT GAN. Shong  ITTLE OF INVENTION: Charles  CORRESSED TOWNSES  ADDRESSED TOWNSES  ADDRESSED TOWNSES  STREET: Two ELLEAT  COMPUTER: California  COMPUTER: California  COMPUTER: CALIFORNIA  COMPUTER: EADABLE FORM  MEDIUM TYPE: FIOP  COMPUTER: EADABLE FORM  MEDIUM TYPE: HOP  COMPUTER: 1344  COMPUTER: APACTION DA  APPLICATION DA  APPLICATION DA  APPLICATION NUMBE  FILING DATE: 31-M  APPLICATION NUMBE  FILING DATE: 31-M  APPLICATION NUMBE  FILING DATE: 31-M  APPLICATION NUMBE  FILING DATE: 11-D  ATTORNAY/AGENT INFORMA  APPLICATION NUMB  REFERENCE CHARACTERIEST  INFORMATION FOR SECID NO:  LENGTH + 97, AMILIANIES
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LENGTH: 92 amino acids TYPE: amino acid

Sequence 4. Appli Sequence 12, Appli Sequence 3. Appli

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6) TPSNREETQGKSNLELLRISHLIQSWLEPVQ 92
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ses 90; Conserva
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                                                                           US-09-964-010-23
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                                                                                                                                                                                      1 MEPTIPLSRLFONAMI, RAHRLHQLAFDTYQEFEEAYIPKEQXYSFLONPQTSI, SFSESIF 60
                                                                                                                                                                                                            1 MEPTIPLSRLFDNAMLRAHRLHQLAFDIYQEFEEAYIPKEQKYSFLONPQTSLSFSRSIP 60
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GENERAL INFORMATION:
APPLICANT: Gan, Zhona Ru
TITLE OF INVENTION: Chimeric Protein Containing an
Intra of Invention: Litramolecular Chaperone Like Sequence
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                                                                                                             100.0%; Score 470; EB 14; Length 32; 106.0%; Pred, No. 2.2e-46;
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/054.873
FILING DATE: 22-Jan -2002
GLASSIFICATION <CORNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Traw LLP
STREWT: Two Embarcadero Conter, Eldith Floor
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FILING DATE: 31-RAR-1998
APPLICATION NUMBER: US 69/423,100
FILING DATE: 11-DEC-2006
AITORNEY/AGENT INFORMATION:
NAME: Mycroft, Frank U
REGISTRATION NUMBER: 46,946
REFERENCE/SOCKET NUMBER: 020167-02013005
INFORMATION FOR SEQ ID NO: 7:
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                                                                                                                                                                                                                                                                61 TPSNREETQQKSNLELLRISLLLQSWLEPVQ 92
                                                                                                                                                                                                                                                                                    61 TPSNREETOOKSNLEHRIFILLIOSWLEPVO 92
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                                                                                                                                                   0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READARGE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IN PC compatible
             TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                               // Sequence 7, Application US/10054873
/ Publication No. US20020164712A1
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STRANDEDNESS: 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: California
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                                                                                                                                                   92; Conservative
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Best Local Similarity
                                                                                                                               Best Local Similarity
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                                                                                                               Query Match
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                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSES FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP
STREET: 1300 I Street, NW
Sequence 23. Application US/09984Cl0
Publication No. US20C30154578Al
GENERAL INFORMATION:
APPLICANT: Ballance, David James
TITLE OF INVENTION: RECOMBINANT FUSION PROTEINS TO GROWIH HORMONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                              STATE: DC
STATE: DC
COUNTRY: USA
ZIP: 2006:3315
COMPUTER REDABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patenting Release #1.0, Version #1.30 (EPO)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/984.01C
FILING DATE: 21-May-2002
PRICH APPLICATION NUMBER: US 09/091.873
FILING DATE: 25-JUN-1998
APPLICATION NUMBER: PCT/GB96/03164
FILING DATE: 19-DEC-1996
INFORMATION FOR SEC, 13 NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 191 amitic acids
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Publication No. US20030153063A1
GENERAL INFORMATION:
APPLICAMY: James A. Wells
APPLICAMY: Brian C. Cunningham
TITLE OF INVENTION: GROWTH HORMONE VARIANTS
FILE REFERENCE: 669.12-US-C7
CURRENT APPLICATION NUMBER: US/10/153,207
CURRENT FILING DATE: 2002-05-22
PRIOR APPLICATION NUMBER: 08,479,884
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                                                                                                                           AND SERUM ALBUMIN
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PRIOR FILING DATE: 1954-02-02
PRIOR APPLICATION NUMBER: 07/960,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                  NUMBER OF SEQUENCES: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: Jinear MOLECULE TYPE: protein
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0; Gaps

Indels

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2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLONPQTSLSFSESIPT 61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
CURRENT APPLICATION NUMBER: US/10/460,706
CUBRENT FILING DATE: 2603-63-26
FRIDA APPLICATION NUMBER: US/09/462,941
PRIOS FILING DATE: 2000-01-14
PRIOS FILING DATE: 1200-01-14
PRIOS FILING DATE: 1997-07-14
NUMBER: OF SEQ ID NOS: 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application US/16;53207; Publication No. US2033615306341
GENERAL INFORMATION:
APPLICANT: James A. Wells
APPLICANT: Brian C. Cuningham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97.9%;
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98.98;
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Hest Local Similarity 98.9%
Withhas 90: Conservative
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                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
CRGANISM: Homo sapiens
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ORGANISM: Homo Sapiens
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Best Local Similarity
Matches 90: Conserv
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US-10-153-207-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-400-708-1
                                                                                                                                                                                                                                                                                            SEO ID NO 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 FPTIPLSKLFDNAMLRAHKLEQLAFDTYQEFEEAYIPKEQKYSFLQNPOTSISTSESTPT 6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: COX III. George N
APPLICANT: Boider Biotechnology, Inc.
APPLICANT: Boider Biotechnology, Inc.
TITLE OF INVENTION: Defivatives of Growth Hormone and Related Proteins FILE REPERENCE: 4152-1-PUS
CURRENT APPLICATION NUMBER: US/10/400,377
CURRENT FILING DATE: 2003-03-25
PRIOR FILING DATE: 2000-01-14
PRIOR FILING DATE: 2000-01-14
PRIOR FILING DATE: 1907-07-14
NUMBER: OF SEQ ID NOS: 41
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APPLICANT: Cox III, George N
APPLICANT: Bolder Biotechnology, inc.
TITLE OF INVENTION: Derivatives of Growth Horsone and Related Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97.9%: Score 460; LB 12; Length 131; 98.9%: Pred. No. 7.8e-45; Live 0; Nismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 191;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C: Mismatches
                                PRIOR APPLICATION NUMBER: 07.675,204
PRIOR FILING DATE: 1742-54-27
PRIOR PILING DATE: 1742-54-27
PRIOR PILING DATE: 1984-19-25
PRIOR PILING DATE: 1984-19-25
PRIOR FILING DATE: 1985-10-28
NUMBER OF SEC ID NOS: 20
SEC ID NO :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Sequence 1, Application US/10406377
; Publication No. US20030162949A1
; GENERAL INFORMATION:
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          PRIOR FILING DATE: 1992-10-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90; Conservative
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90; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                               IYPE: PRT
ORGANISM: Homo Sapiens
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ORGANISM: Homo sapiens
US-10-400-377-1
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US-10-400-708-1
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Best Local S
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Pred. No. 9e-45;
0; Mismatches 7; Indels (
                                                                                                                                                                                                                                                                                                                 APPLICANT: CARGES A. WELLONG APPLICANT: CARGOTT BELIAN C. CUNDINGHAM TITLE OF INVENTION: GROWTH HORMONE VARIANTS FLEE REPERENCE: 669.12-US-C7 CURRENT FILING DATE: 2002-05-22 CURRENT FILING DATE: 1995-06-07 PRIOR APPLICATION NUMBER: 08/19,884 PRIOR PILING DATE: 1995-06-07 PRIOR PELICATION NUMBER: 08/19,884 PRIOR PILING DATE: 1995-06-07 PRIOR PELICATION NUMBER: 08/19,723 PRIOR APPLICATION NUMBER: 07/960,227 PRIOR APPLICATION NUMBER: 07/960,227 PRIOR PILING DATE: 1992-04-27 PRIOR PILING DATE: 1992-04-27 PRIOR PILING DATE: 1989-10-26 PRIOR FILING DATE: 1989-10-26 PRIOR FILING DATE: 1989-10-28 PRIOR APPLICATION NUMBER: 07/264,611 PRIOR PELICATION NUMBER: 07/264,611 PRIOR FILING DATE: 1988-110-28 NUMBER: 97-864,611 PRIOR FILING DATE: 1988-110-28 NUMBER: PEASISEQ FOR WINDOWS VERSION 4.0 SSPILMARE: FEASISEQ FOR WINDOWS VERSION 4.0
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6. PSNREETQQKSNLELLRISLLLIQSWLEPVQ 91
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115 PSNREETQQKSNLFULRISLLLTQSWLEPVQ 145
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US-09-853-688-2
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GENERAL INFORMATION:
APPLICANT: Sato, Sei)
APPLICANT: Higashikuni, Nachiko
APPLICANT: Kondo, Masaaki
ITLE OF INVENTION: DNAS ENCCDING NEW FUSION PETILIKS AND PROCESSES FOR
ITLE OF INVENTION: DNAS
FILE REFERENCE: 382.1026
CURRENT APPLICATION NUMBER: US/59/280.030A
CURRENT APPLICATION NUMBER: US/99/395
EARLIER FILING DATE: 1998-03-26
SAFLUER FILING DATE: 1998-03-31
NUMBER OF SEO ID NOS: 66
SOFTWARE: PATENTION VEF. 2.0
FENCINE APPLICATION NUMBER: PATENTION OF TENCH OF 
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Sequence 9, Application US/S0929518
Fatert No. US2002090678a1
GENERAL INFORMATION:
APPLICANT: Kordvum, Vitally A.
APPLICANT: Chernykh, Svitiana I.
APPLICANT: Slavoflenko, Iryna Yu.
APPLICANT: Vozianov, Olekandr
ITILE OF INVENTION: PRAGE-DEFENDENT SUPER PROTEIN AND PEFIIGLS
CURRENT FILING DAZE: 2001-08-15
PRIOR FILING DAZE: 2001-08-15
PRIOR FILING DAZE: 1999-05-25
NUMBER OF SKO ID NOS: 11
SOFTWARE: FastSEG for Windows Version 4.0
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; Sequence 66. Application US/05280030A
: Patent No. 08200100215:541
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TYPE: PRT
ORGANISM: Artificial Sequence
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Best Local Similarity 98.99
Matches 90, Conservative
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Best Local Similarity 9
2.2005 Conservat
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ORGANISM: Homo sapiens
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Stream No. US20020081665A1
GENERAL INFORMATION
GENERAL INFORMATION
GENERAL INFORMATION
GENERAL INFORMATION
GENERAL INFORMATION
APPLICANT PROCEER, ANNIE M.
APPLICANT PROCES, DAVID N.
ITLE OF INVENTION METHOD FOR DETECTING GROWTH HORMONE VARIATIONS IN ITLE OF INVENTIONS HUMANS, THE VARIATIONS AND THEIR USES
TITLE OF INVENTION WEBER: US/09/853,688
GURRENT FILLING DATE: 2C01-05-14
NUMBER OF SEQ ID NOS: 66
SSCTWARE PARENTIN Ver. 2.1
SSCTWARE PARENTIN Ver. 2.1
SSCTUDNS 2
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Fest Local Similarity 97.8%; Pred. No. 4.5e-44;
Matches 89; Conservative 0: Mismatches 2; Indels
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Pred. No. 4.5e-44;
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: CRGANISM: Homo sapiens
US: 09:853-688-2
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: OKGANISM: Homo sapiens
US-09-969-748C-4
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Matches

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2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: BUSSELL BUDGLAS A.
APPLICANT: SCHLITTLER, MICHAEL
APPLICANT: SCHLITTLER, MICHAEL
TITLE OF INVENTION: PERFESSION AND PURIFICATION OF BIOACTIVE, AUTHENTIC
TITLE OF INVENTION: PCLYPETIDES FROM PLANTS
FILE REFERENCE: 16712.0031
CURRENT APPLICATION NUMBER: US/09/824,200
CURRENT APPLICATION NUMBER: 0601-04-03
PRIOR APPLICATION NUMBER: 60/164,217
PRIOR FILING DATE: 2000-04-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gorgode, Gina
NUMBER OF INVENTION: THYROID AND PITUTARY MEMBRANE PROTEIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS: 4
STREED: 3174 POPTER PHARMACEUTICALS, INC.
STREED: 3174 POPTER DRIVE
CITY: PALO ANTO
STATE: CALLEDREIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                            87 PSNRSETQOKSNLFILLRISHLIOSWLEPVQ 137
                      PSNREETQGKSNLELLRISHLIQSWLEPVQ 92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/850,897
FILING DATE: C7-May-2001
CLASSIFICATION: <UNKNOWN>
PRICE APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 09/087,678 FILING DATE: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 39,132
                                                                                                                                           S-06-824-208-12
Sequence 12. Application US/09R24280
Piblication No. US20038167531A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/09850887; Patent No. US/0050009778A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: CERRONE, MICHAEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corley, Neil C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94304
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentl: Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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LENGTH: 191
TYPE: PRI
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                      (N
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                                       2 FPT:PLSREEDNAMLRAHRLHQIAFDIYQEFEBAYIPREGKYSELUNPQISLSESSIFT A.
                                                              27 PPITELSREEDMASLRAHREAGIAFOTVOREPERAYTYREUWYSFUONFOTSLOFSHET #6.
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APPLICANT: PROCTES, ANNIE M.
APPLICANT: PROCTES, ANNIE M.
APPLICANT: GREGORY, JOHN
APPLICANT: MILLAR, DAVID S.
TITLE OF INVENTION: METHOD FOR DEDCTING GROWTH HORMONE VARIATIONS IN TITLE OF INVENTION: HUMANS. THE VARIATIONS AND THERE CESS
FILE REPERSINCE: WORTB
                                                                                                                                                                                                                                             US-69-804-4094-16
Sequence 16. Application US/03804403A
Sequence 16. Application US/03804403A
Patent No. US20020155100A1
GENERAL INFORMATION:
APPLICANT: KIEFFER, TIMOTHY J.
APPLICANT: CHEUNG, ANTHONY T.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR REGULATED PROTEIN
TITLE OF INVENTION: EXPERSSION IN GUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.4%; Score 453; DB 10; Length 217; 97.8%; Pred. No. 5.8e-44;
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96.78; Pred. No. 2.8e-43;
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87 PSNREETQOXSNLFILLELSLILLOSWLFFVG 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/804,409A
CURRENT FILING DATE: 2001-03-12
NUMBER OF SEQ 10 NOS: 18
SOFTWARE: Patentin Ver. 2.1
SEQ 10 NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/851,688
CURRENT TILING DATE: 2001-05-14
NUMBER OF SEQ ID NOS: 66
SOFTWARE: Patentin Ver: 2:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4. Application US/09853688 Patent No. US20026081605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 96.7
Matches 88; Conservative
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Matches 89; Conservative
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US-09-853-688-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-804-409A-15
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LENGIH: 217
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REFERENCE/DOCKET NUMBER: PF-0535 GS
TELECOMMUNICATION INFORMATION:
TELETAX: (650) 845-055
TELETAX: (650) 845-056
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 227 amino acids
TYPE: amino acid
STRANDENESS: Single
TYPE: amino acid
STRANDENESS: Single
TOFOLGY: Innear
INMEDIATE SOURCE:
LIBBARY: GenBark
CLONE: 4406987
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-69-850-867-3
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2 PPIIPLSKLEDNAMLRAHRLHOLARDTYQEFEBAYTPKBQXYSFLQNRQTSUSFSESIRT 61 HILLI HEBAYLPKEBEAYLPKEGKYSFLKNNQTSLOFSBSIFT 36 QQ δλ

Query Match Best Local Similarity 84.5%, Prod. No. 1.9e-37, Matches 77; Conservative 6; Mismatches 8: Indels

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Search completed: September 15, 2003, 12:23:75 Job time : 38:5806 secs

GenSore version 5.2 6 Copyright (c) 1993 - 2003 Compagen Ltd.

OM protein - protein search, using sw model

September 15, 2003, 11:56:45; Pararch time [5]1685 Seconds (Without alloments) [83,284 Million cell updates/seconds Run on:

Title: Perfect score:

NUMBER STOLLOSMINING 05-00-423-100-2 470 1 MEPTTPLSFLFONAMIRAHK... Secuence:

Scoring table:

283308 seqs, 96168682 residues BLOSCM62 Gapop 10.0 , Gapext 0.5 Searched:

28330+ Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 3% Maximum Match 100% Listing first 45 summaries

PIR\_76:\*
1: pir1:\*
2: pir2:\*
3: pir3:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		ď			SUMMARIES	
Result		Query				
SO.	Score	Match	Match Length	CB.	GI.	Description
٦	46C	97.9	217		STHU	r didor:
7	460	67.6	217	N	167410	
۳:	422	60 (E.	217	_	STRUV	C4
7	422	83.8	256	٠.	STHUV2	.~1
S	402	85.5	217	<b>∵</b> 1	167411	
9	397	84.5	217	7	167403	J. F.
7	336	84.3	212	(1)	167498	chorionic somatomu
no	336	~ 386	217	e a	153267	cherionic spratera
cT\	181	81.1	217	<b>٠</b> ¬	LOHUC	cheriomammetresin
10	/**	81.1	217	~	E32435	cheriomanmetropin
11		76.5	215	(7	A26449	cherionammetrepin
12		56.1	216	(1	B49159	Somatotropin - qo.
13		55.4	196	(7)	PN0140	•
14		64.8	216		STMS	Somatotropin precu
15		54.4	190	٦	SINC	
16		54.4	216	-	STRT	somatotropin precu
17		54.4	216	17	849483	
an c t		64. 	190	CA	JK5219	
19		64.1	215		8126	somatofropin preen
20	301.5	64.1	216	7	146145	scratotropin precu
21		64.1	216	?	JC4632	somatotropin prem
22			216	<b>:</b> 4	A37762	soratotropin precu
23			06.7		A51584	Somatotropin alr
24		67.5	000	~	JS0429	sometotropin Arc
25			217	,-·	STBC	Somatotropin precu
26			217	, .	STSH	
27			217	. 1	STGT	somatotropin precu
28	289.5	99	217	7	8	somatotroin dum
29		59.3	216	~	JC1514	Ξ.

somatotropin precu	somatotropin - gre	somatotropin precu	somatotropin - Rus	somatotropin - bul	somatotropin - bul	somatotropin precu	choriomammotropi:	somatotropin - bow	somatotropin - biu	EST/beta-Gal mutan	somatotropin I pre	somatotropin - sei	somatotropia - com	somatotropin - nob	somatotropin - sil
A60509	A60625	504929	S21750	A55816	151188	580037	B32435	151256	A60623	167761	JTC483	CNC387	CC5682	150763	838351
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38.6	57.1	ଜ. ଓଡ	رم 8	52.7	56.7	50.5	49.8	49.7	48.0	43.8	37.1	36.4	35.2	35.2	35.2
က က	268.5	261	257.5	247.5	238.5	237.5	234	233.5	225.5	206	174.5	171	165.5	165.5	165.5
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## ALIGNMENTS

	RESULT 1
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	N.CONTAINS GROWE: POTHER DESCRIPTION OF FIGURE OF FORM SOME STATEMENT OF THE SOME STATEMENT OF THE SOME STATEMENT OF THE SOME SOME STATEMENT OF THE SOME S
	C.Date: 24-Apr-1984 #sequence revision; O-Feb-1965 #text_change U8-Dec-2000
	LINCORDIONI TAYSONE, MAZENASI ANADONES MALERI, NAGONES ANASSAVI ANGENTOS ANELOS. RIDENOSOS EN VINCORES DIO RIDORDEMENTE EN RESERVA
	Nucleic Acids Res. 9, 3719-3730, 1991
	A:Title: Human growth hormone DNA sequence and mRNA structure: possible alternativ
	A;Reference number: A93731; MUID:82014939; PMID:6269091
	A:Accession: A9373:
	A: Molecule type: DNA
	A; Kesiques: 1-Z1/ <den></den>
	A) Cross-reletences: 68 VUOSZV
	A;NOCE: the Zon Short table Sold College of the State of
	Schooling I. I. I. I. 1989. Television of the Control of the Contr
	A:Title: The human growth hormone locus: nucleotide sequence, biology, and evoluti
	A;Reference number: A32435; MUID:89307277; PMID:2744760
	A. Accession: A32435
	A; Wolecule type: DNA
	A;Residues: 1-217 <che></che>
	A.Cross-references: GB:J03071; NID:g183148; PIDN:AAA52549.1; PID:g183149
	R;Roskan, W.; Rougeon, F.
	Nucleic Acids Res. 7, 305-320, 1979
	A;Title: Molecular cloning and nucleotide sequence of the human growth hormone str
	A; Reference number: A93694; MUID:80034477; PMID:386281
	A; Accession: A93694
	A;Molecule type: mRNA
	A; Residues: 1-217 <ros></ros>
	A)Cross_references: GB:V06519
	A,Note: 35-Pro was also found
	R;Martial, J.A.: Hallewell, R.A.; Baxter, J.D.; Goodman, H.M.
	Science 205, 602-607, 1979
	A)Title: Human growth hormone: complementary DNA cloning and expression in bacteri
	A, Reference number: A94247; MUID:79203293; PMID:377496
	A)Accession: A94247
	A:Molecule type: mRNA
	A:Residues: 1-217 <mar></mar>
	Fill, C.H.; Dixon, J.S.; Liu, W.K.
	Arch. Biochem. Biophys. 133, 70-91, 1969
	A:Title: Human pituitary growth hormone. XIX. The primary structure of the hormone
	A;Reference number: A55848; MITD:69289202; PMID:5810834
	A:Contents: annotation
	State C.H.; Dixon, J.S.
_	Atch. Biochem. Biophys. 146, 233-236, 1971
	A,Title: Human pituliary growth hormone, XXXII. The primary structure of the hormo
	A.Reference number: Abs651; MCLD:/Z143935; PMID:514402/
	A. Accession: A90051
_	A:Molecule type: protein

of

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Cibale: 31-May-1996 #sequence_revision 31-May-1996 #text_change 16-Jul-1999
Cibacession: 16440, A0530,
Endocrinology 133, 1744-1752, 1993
Ajthu: Chohing of four growth hormone/chorionic somatomanmolropin-related complem
Astronomic number: 153267; MUTD:94008724; PMID:8404617
Astronomic number: 153267; MUTD:94008724; PMID:8404617
                                     in somatetrophic cells
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                                                                                                                                       Ascensistances: GBB:119982; OXIM:139250
Ascensistances: GBB:119982; OXIM:139250
Ascensistances: GBB:119982; OXIM:139250
Ascensistances: GBB:119423.1-17423.3
Ascensistances: GBB:119423.1-17423.3
Ascensistances: GBB:119423.3
Ascensistances: GBB:11942
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Astatus: translated from GH/EMBL/DDBJ
Astatus: translated mRNA
Astatus: 1-217 cRES>
Astronses: GB:L16556; NID:g293114; PIDN:AAA18842.1; PID:q293115
R:Li, C. Gi: Chung, D.: Lahm, H.W. Stein, S.
Arch: Blochem. Blobbys. 245, 287-291, 1986
Astrole: The primary structure of monkey pituitary growth hormone.
Askeference number: A05094; MUID:86129466; PMID:3080959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              man and monkey
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A:Contents: annotation; identification of source organism
                                Cocomment: The gene for this hormone is transcribed only in Cocomment: About 90% of sometotropin is the 22K long form, Cocemetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 97.9%; Score 460; DB 2; L Best Local Similarity 98.9%; Pred. No. 4.4e-42; Matches 90; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 460; DB 1;
Pred. No. 4.4e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A:Molecule type: protein
A:Residues: 27-99, 'Q',101-178,'D',180-217 <LIC>
A:Note: the monkey species is not identified in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HITTELLITE HITTELLITE HITTELLITE SANKEPVO 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 460;
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N:Alternate names: growth hormone
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98.98;
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Best Local Similarity 98.9
Matches 90; Conservative
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Science 125, 883-884,
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R. Messidues: 27-94-56-27-520-
R. Malline New Hole State: 246, 90-21-102.
A. Million Revised principle for Luman growth horizone.
A. Million Revised principle for Luman growth horizone.
A. Million Revised principle for Luman growth horizone.
A. Missidues: 27-21-2415.
A. Missidues: 27-21-2415.
B. Million: Suggenere of Filliary and placental Intersons for States of Growth horizones: evolution A. Missidues: 27-21-2415.
A. Missidues: 
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Chacession: [674]]
Bidolos, T.G.: Durning, M.: Fisher, J.M.: Fowler, P.D.
Bidolos, T.G.: Durning, M.: Fisher, J.M.: Fowler, P.D.
Bidolosy, 133, 1744-1752, 1993
A.S.Lile: Cloning of four growth hormone/chorionic somatomanumolropin-related complematements on miber: 153257; MJID:94008724; PMID:8404617
                                                                                                                                                                                                                                                          2 FPT1PLSRLFDNAMLRAHRLHQLAFDTYQEFEEAY1PKEQKYSFLQNPQTSLSFSESIPT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N;Alternate names: growth hormone
C:Species: Macaca mulatta (rhesus macaque)
C:Cate: 31:May-1996 #sequence_revision 31-May-1996 #text_change 16-Jul-1999
                                                                                                                                                                                 C:Species: Homo sapiens (man)
C:Date: 30-Sep-1989 #sequence_revision 10-Feb-1995 #text_change 02-Sep-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 PPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLGNPQTSLSFSESIPT
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                                                                                                                                          N:Alternate names: growth hormone variant-2; placental somatotropin form 2
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ACCTOSS-rofolonos: GB:L16555; NID:g293116; PIDN:AAA20180.1; PID:g293117
C.Superfamily: prolactin
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A.Senei GEBIGH2
A.Senei GEBIGH2
A.Map position: 1742-17424
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A.Map position: 1752-17424
A.Map position: 1752-17424
C.Supertarily: prolactin
C.Supertarily: prolactin
C.Senei and termative splitcing; hormone; placenta
F.1-26/Positi: signal sequence status predicted <SIG-
F.27-255/Product: somatotropin 2 splice form 2 *status predicted <MAT>
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Ajavolecule type: ERAN
Ajavolecules: 1-256 4000
Ajkoile: an alternative splice junction for introm 4 is used
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Pred. No. 6.7e-38;
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1 Similarity 92.3%;
84; Conservative
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recent divergent
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A.Rocession: a280/2

A.Rocession: a2817 cCOo.

R.Seburg, P.B.

DNA 1, 239-249, 1982

A.Tille: The human growth hormone gene tabily: nucleotide sequences show recent diverged A.Reference number: A3511; MUID:33182015; PMID:315696

A.Rolecule type: DNA

A.Rolecule type: ML: Frankenne, F.; Hennen, G.

A.Reference number: 152104; MUID:85024984; PMID:246055

A.Title: Conjung and enclectide sequence of placental EGH-V CFNA.

A.Reference number: 152104; MUID:85024984; PMID:246055

A.Reference number: 152104; MUID:85024984; PMID:246055

A.Status: proliminary, translated from GB/EMBI/2DB3.

A.Reference F.; Scippo M.L.; Yan Beeuren, J.; Igout, A.; Hennen, G.

A.Reference on The A.Reference on Telection Mid: Yan Beeuren, J.; Igout, A.; Hennen, G.

A.Rocession: A60711

A.Rocession: A
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A.Introns: 4/1: 57/3: 97/3: 152/3
A.Introns: 4/1: 57/3: 97/3: 97/3: 152/3
C.Supertamally: productive spliciou; diycopratedit; bicumumer; pideouta
F:1-26/Domain: signal sequence 4status predicted 4SIC:
F:1-26/Domain: signal sequence 4status predicted 4SIC:
F:1-27/7/Froduct: somatorropin 2. long splice form *status predicted 4SIC:
F:73-191,206-215/Pissulfide bonds: #status predicted
F:166/Binding site: carbohydrat: (Asn) (covalent) *status predicted
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Pred. No. 5.5e-38:
3: Mismatches 4: Indels
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84; Conservative
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Best Local S
Matches 84
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C. Species: Howo sapiens man and controlled sometimes are controlled sometimes names as controlled sometimes and controlled an
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A.Reference number: A94427
A.Accession: A94427
                                                                                                       Ġ
                                                                                                                                                           3 PTIPLSRLFDNAMLRAHRLHQLAFDIYQEFEEAYIPX50KYSFLQNPQTSLSFSESIPTP 62
                                                                                                                                                                                             choriomammotropin A precursor [validated] - human
N:Alternate names: chorionic somatomammotropin 1; placental lactogen
                                                                                                           ö
                                                Length 217;
                                                                                                    Indeis
            SNIEETQOKSNIELLRICHTIGSWEEPVQ 117
                                                                                                                                                                                                                                                                                63 SNREFTQQKSNLELLRISLLLIQSWLEPVQ 92
                  Outry Match
Sest Local Similarity 82.2%
The 74, Conservative
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167408

Cobrionic Somatomammotropin-2 - rhosus macaque (fragment)

Cispecies: Macaca mulatta (rhesus macaque (fragment)

Cispecies: Macaca mulatta (rhesus macaque)

Cispecies: TG.: Purning. 157408

Article: Cloning of four growth hormone/chorionic somatomammotrop.u-related complementary. Areference number: 153267: MUID:94060724; PMID:8404617

A.Reference number: 153267: MUID:94060724; PMID:8404617

A.Residue: preliminary: translated from GS/FMBL/DDRJ

A.Molecule type: mRNA

A.Residues: 1-713 ckES>

A.Gross-references: GBLL16553: MID:9293110: PIDN:AAA18846.1; PID:m29411:
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C.Species: Macaca mulatra (rhesus macaque)
C.Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 16-3:1-1999
C.Accession: 153267
R.Golos, T.G.: Durning, M.; Fisher, J.M.; Fewler, P.D.
R.Golos, T.G.: Durning, M.; Fisher, J.M.; Fewler, P.D.
A.Title: Cloning of four growth hormone/chorionic somatomammetropin-related compagnential
A.Reference number: 153267
A.Accession: 153267
A.Accession: 153267
A.Hoblecule type: mRNA
A.Residues: 1-217 <RES>
A.Gross_references: GB:L16592: NID:q293106: PIEN:AAA:8839.1; PID:ç238:39
A:Cross_references: GB:L16592: NID:q293106: PIEN:AAA:8839.1; PID:ç238:39
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 PTIPLSRIFONAMIRABRIHQLAFDTYQEFEEAYIPKEQKYSFLQNPGTSLSFSESTP19 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28 PSVPLSKLFUNIAMQAHRJHQIAFDTYQEFEKTYIPKEKKHSLMGNPQASFCPSESIPTP 87
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                                                                                                                                                                                                                                                                                                                                                                                                                            84.5%; Score 397; DB 2; Longth 217;
illarity 83.3%; Pred. No. 2.7e-35;
Conservative 8; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44.3%; Score 396; DB 2: Ecogth 213; 82.2%; Pred. No. 3.36-35; tive 11; Mismatches %; Indexs
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Matches 74; Conservative
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Best Local Similarity
Thes 75; Conserva
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C)Accession: E32435
R)Chen, E.Y.; Liao, Y.C.; Smith, D.H.; Harrera-Saldana, H.A.; Gelinas, R.E.; Seebur Genomics 4, 479-497, 1989
A;Title: The human growth hormone locus: nucleotide sequence, biology, and evolution A; Reference number: A32435; MJID:89307277; PMID:2744763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A:Title: The human growth hormone gene locus: structure, evolution, and allelic variaterence number: A26449; MUID:87161235; PMID:3030680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Risouthard, J.N.; Sanchez-Jimenez, F.; Campbell, G.T.; Talamantes, F.
Endocrinology 129, 2465-297, 1991
A.Title: Sequence and expression of hamster prolactin and growth hormone messenger
A.Reference number: A49159; MulD:92063850; PMID:1954881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C.Accession: A26449
R:Hirt, H.; Kimelman, J.; Birnbaum, M.J.; Chen, B.Y.; Seeburg, P.H.; Eberhardt,
DNA 6, 59-70, 1987
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                  C.Species: Homo sapiens (man)
C.Date: 29-Dec-1989 #sequence_revision 29-Dec-1969 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NATECRALE names: growth hormone
C.Species: Mesocricetus auratus (golden hamster)
C.Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 21-Jui-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C:Species: Homo sapiens (mar)
C:Date: 30-Jun-1988 #sequencc_revision 30-Jun-1998 #text_change 28-Jul-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1:11:111:11:11 | 1:11 | 1:11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|11 | 1:11|
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CGenetics: GFR:CSH2
A:Gross-references: GDB:119813; OMIM:118820
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C:Superfamily: production
F:51-26/Domain: Signal Sequence *Status predicted <SiG>
F:27-215/Product: choriogammotropin, hCS-3 ailele *status predicted
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80.5%; Pred; No. 2.9e-31;
11vc 8; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 381; DB 2; T
Pred. No. 1.4e-33;
8; Mismatches 8;
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        NiAlternate names: chorionic somatomammotropin 2
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82.0%:
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Les 73; Conservative
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0;Supertamily: prolactin
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Matches 70: Conserv
                                                                                                                                                                                                                                                                                                                                                                             A:Status: preiminary
A:Molecule type: DNA
A:Residues: 1-217 <CHE>
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chorlomammotropin B precursor - human
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mes 73, Conservative
Type: protein 27-217 <NIA>
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Search completed: September 15, 2003, 12:04:19 Job time : 16.1685 secs
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CiSpecies: Mus musculus (house mouse)
CiSpecies: Muscape-1987 #sequence_revision 30-Sep-1987 #text_change 28-May-1939
CiAccession: B2391:
R:Linzer, D.I.H.: Talammites, F.
J. Biol. Chem. 260, 9574-9579, 1985
A:Title: Nucleotide Sequence of mouse projectin and growth hormone mkNas and expression
A:Reference number: A92548; MUID:85261358; PMID:2991252
A:Accession: B2391:
A:Accession: B2391:
A:Accession: B2391:
A:Accession: B2391:
A:Accession: D2391:
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C.Species: Balaecoptora borealis (sei whate)

C.Species: Balaecoptora borealis (sei whate)

C.Species: Balaecoptora borealis (sei whate)

C.Sacession: PN0140

R.Yudaev, N.A.; Pankov, Y.A.; Bulatov, A.A.: Gsipova, T.A.

Biokhimita 47, 1059-1069, 1982

A.F.Itle: Attino acid sequence of seiwhale sometotropin.

A.Reference number: PN0140; MUID: 93000569; PMID: 7115913

A.M.Cossion: PN0140

A.M.Nolecule type: protein

A.Residues: 1-190 < YUD.
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A,Accession: B49159
A,Status: preliminary
A)Status: preliminary
A,Molecule type: mRNA
A,Residues: 1-216 <SOU>
A,COUS-references: GR.S06299; NID:q239355; PIDN:AAB20466.1; PID:q259446
A,Cross-references: GR.S06299; NID:q269355; PIDN:AAB20466.1; PID:q259446
A,Note: sequence extracted from NGB: backbone (NUBIN:66299; NGBIP:66210; C)Superfamily: prolaction
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67.0%; Pred. No. 5.5e-26;
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C:Superfamily: productin
C:Keywords: growth factor: hornone
F:52-163,180-188/Disulfide bonds: *status predicted
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Standorforder and a sequences around the cystine residues in procession: A91382.

Standorforder and a sequence_revision 1-3u1-1981 #text_change 23-Aug-1996
C.Species: Equal caballus (domestic horse)
C.Species: Equal sequence_revision 1-3u1-1981 #text_change 23-Aug-1996
C.Accession: A91772. A91385. A01883. A90240: A01514
E.Zakin, M.M.: Poskus, E.: Langton, A.A.; Ferrara, P.; Santome, J.A.; Dellacha, J.M.
Int. J. Pept. Protein Res. 8, 435-444. 1970
A.Ztelerence number: A91772. MUID:77005410; PMID:965151
A.Accession: A91772. MUID:77005410; PMID:965151
A.Accession: A91772. MUID:77005410; PMID:965151
A.Accession: A91782. MUID:77005410; PMID:965151
A.Accession: A91782. MUID:77005410; PMID:4747849
A.Accession: A91895. MUID:74020362; PMID:4747849
A.Accession: A91895. MUID:74020362; PMID:4747849
A.Accession: A91885. MUID:74020362; PMID:4747849
A.Accession: A91885
A.Accession: A91883
A.Accession: A01883
A.Accession: A91883
A.Accession: A91888
A.Accession: A91884
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    Length 216;
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                                                                                          17: Indels
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A/Residues: 176-190 <cLI>
C/Superfamily: projection:
P/S2-163,180-188/Disulfide bonds: #status expedimental
        Dis 🗀
64.8%; Score 304.5; DB 1
64.8%; Pred. No. 2.4e-25;
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## AL IGNMENTS

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SCMA_HUMAN STANDARD: PRT: 217 AA.
F01241: 014405; C16631: 09HS21: 09UMJ7: 09UMJ5: 21-401:1986 (Rel. 01. Created)
21-401:-1986 (Rel. 01. Z. Lasted)
15-5RF-2053 (Rel. 42. Last annotation update)
Scmatotropin precursor (Growth hormone) (GH) (GH-N) (Pituitary growth
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NCBI_TaxID=9606,
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MEDLINE-80034477; PubMed-386281;
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MEDLINE-80130195; PubMed=7356479;
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MEDLINE-71139765, PRDMed-5279046;
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                  FROM N.A. (ISOFORM 4).
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                                                                                                            2 PPTIPLSKLFDNAMLRAHRI HOLAFLTYQBFERAYI PKBOKYSFI GNPCTSL SPSFS1 PT 61
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Li C.H., Structure of monkey pituitary growth hormone.";
Arch, Blochem. Blophys. 215287-291(1986).
-!- FUNCTION: Plays an important role in growth centrol. Its rajot role in stimulating body growth is to stimulate the liver and role in stimulates both the differentiation and proliferation of mychlasts. It also stimulates and protein synthesis in muscle and other
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                                                                  5.15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Graniata, Vertebrata, Esteleost.:11:
Mammalia, Butheria, Primales: Catarrillo: Geropificeleae.
                                                                    ; <del>-</del> ;
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                  Length 217.
                                                               Indels
                Score 465, 200 Pred, No. 8.66 41;
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BY SIMILARITY.
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E -> 0 (IN REF. .
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01-6CT-1994 (Rel. 30, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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                                                               0: Mismatches
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HSSP: 90124: 1 TAXI.
InterPro: 1PR001400: Somatotropin.
Pfam: PP00103: hormone: 1 PR051E: PS00256: SOMMTOTROPIN.: 1 PR051E: PS00536: SOMMTOTROPIN.: 1 PR051E: PS00536: SOMMTOTROPIN.: 1 PR051E: PS00536: SOMMTOTROPIN.: 1 PR0501E: PS00536: PS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Macaca mulatta (Rhesus manaque).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hormone) (Growth hormone i).
                97.98;
                                          98.9%;
                                        Best Local Similarity 98.9
Matches 90; Conservative
                                                                                                                                                                                                                                                                                                                                                             STANDARD;
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237
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                  Query Match
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                         2 FPTIPLSRLFUNAMLRAHRLHOLAFDTYQEFEGAYIPKEQKYSFLQNPQISLSFSESIPT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-: FUNCTION: Plays an important role in growth control. Its major role in stimulation to the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues (By similarity).
-: SUBCELULAR JOCATION: Secreted.
-: SIMILARITY: BELONGS TO THE SOMAIOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                               2 FPTIPLSRLFUNAMLKAHKLHQLAFDTYQEFERAYIPKEQKYSFLQNPQTSLSFSESIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Somatetropin precursor (Growth hormone) (GH) (GH-N) (Pituitary growth
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Mammalia, Butherla, Primates, Catarrhini, Mominidae, Pan.
NCBL_TaxID=9598;
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                                                                                 Length 217;
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N -> D (IN REF. 2).
2C5180341EEC46D0 CRC64;
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8.8e-41;
                                                                              Score 460; DB 1;
Pred. No. 8.8e-41;
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(Re), 41, Last annotation update)
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Pred. No. 8
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pfam; PF00163; hormone; 1.

PRINTS; PR00836: SOMATOTROPIN.

PROSITE; PS00386: SOMATOTROPIN.

PROSITE; PS00385: SOMATOTROPIN.

HOrmone; Pituliary; Signal.

SIGNAL.
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                       24913 MW;
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                                                                                 97.98;
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217 AA:
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Matches 90, Cosserv
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Best Local Similarity
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79
208
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28-FEB-2005
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NCBI_TaxID=9598;
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P58757;
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SCOOR SERVICE SC
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-!- FINCTION: Plays an important role in growth control. Its majer role in stimilate the liver and other insues to secrete IGF-1. It stimulates both the differentiation and proliferation of mychlasses, it also stimulates anno doil optake and proliferation of mychlasses, it also stimulates anno doil optake and prolifer synchesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saimiri boliviensis boliviensis (Bolivian squirrel monkey).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata: Euteleostomi;
Mammalia; Eutheria; Primatas; Platyrrhini; Cebidao: Cebinae; Saimiri.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tisses (By similarity).
SUBCELLUJAR LOCATION: Secreted.
SIMILARITY: BELGNGS TO THE SOMATOTROPIN/PROLATIN FAMILY.
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HY SIMILARITY.
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951526992C523F7 CRC64;
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28-FEB-2003 (Rel. 4], Last Sequence update)
28-FEB-2003 (Rel. 4], Last annotation update)
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INTEPPRO: PROJUGO. SOMBIOLINGELT.
PÉRU, BOCCOS. LOCTOCOS. PROJUS.
PRINTS: PROGRAG. SOMATO:ROJU.
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217 AA:
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Q9GMB3;
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P58343;
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                                                                                                                                                                                                                                                                                                                                                                                    Wallis O.C., Wallis M.;

"Cloning and characterisation of a putative growth hormone encoding gene from the marmoset (Callithria jacchus).";
Submitted (AUG-2000) to the EMBL/GenBark/DDBJ databases.

-!- FUNCTION: Plays an important role in growth control. Its major roie in stimulating body growth is to stimulate the liver and other tissues to secrete 1GF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues (By similarity).
-:- SUBCELLULAR LOCATION: Secreted.
-:- SUBCELLULAR LOCATION: Secreted.
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28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Growth hormone variant precursor (GH-V) (Placenta-specific growth
                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Platyrrhini, Callitrichidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 217:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91.9%; Score 432; UB 1;
91.2%; Pred. No. 7.2e-38;
26-FBB-2303 (Rel. 41, Created)
28-FBB-2303 (Rel. 41, Last sequence update)
26-FBB-2303 (Rel. 41, Last annotation update)
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BY SIMILARITY.
BY SIMILARITY.
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5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY SIMILARITY
                                                                                                  Somatotropin precursor (Growth hormone)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pram: PF00103; hormone: 1.
PROSITE: PS00266; SOMATOTROPIN_1; 1.
PROSITE: PS00338; SOMATOTROPIN_2; 1.
Biormone: Pltuttary; Signal. = 26
                                                                                                                                                                  Callithrix jacchus (Common marmoset)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AJ297563; CAC03481.1: -.
HSSP; P01241; 1A22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24959 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hormone) (Growth hormone 2).
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217 AA;
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nos 83: Conserv
                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                            NCBI_TaxID=9483;
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proteins.
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           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss lustified of Stoinformaties and the EMF outstation the European Bioinformatics Institute. There are no restrictions of use by non-profit institutions as long as its context, is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.sbrsib.ch/angenney.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 PPTIPLSKLFDNAMLRAHRLHQLAFDTYQFFBEAYIPKEQKYSFLONPOTSLSFSESIFT 61
                                                                                                                                                                                            differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in miscle and other
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                                                                                                   Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete [GF-1]. It stimulates both the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P01242. P09587;
21-JUL-1966 (Rel. G., Greated)
28-FEB-2003 (Rel. 41, Last Sequence update)
15-SEP-2003 (Rel. 42, Last ansotation update)
Growth hormone variant precursor (GH-V) (Placenta-specific growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Motazoa: Chordada: Cradiata, Vertobrata, Enteleostumi:
Mammalia: Eutheria: Primatus: Canarrhin: Rominidae: Bono.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The human growth hormone jene tamily: nucleotide sequences show
                                            Revol A., Esquivel D., Santiago D., Barrera-Saldama H.: "Independent duplication of the growth hormone gene in three Anthropoidean lineages.";
                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: Expressed in the planeage. SMILARITY: BELONGS TO THE SOMATOTROPIN/FRONACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        recent divergence and predict a new polypeptide hormone.".
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BY SIMILARITY.
1592A429075677DE GRC64:
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GROWTH HORMONE VARIANT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91.5%; Score 430; DB 1; 93.4%; Pred. No. 1.2e-37; ive 3; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 PSHRVKIQCKSNLELLKISLLLTCSMLEFVC 117
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MEDLINE=88243769; PubMed-3379057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam: PF00103; normone; 1.
PROSITE; PS00266; SOMATOTROPIN_; 1.
PROSITE; PS00338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Segreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF374233; AAL72285.1; -.
InterPro; IPR001400; Somatotropin.
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MEDLINE-83182010; Pubmed-7169009;
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Hes 85; Conserv
  [1]
SEQUENCE FROM N.A.
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208
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Klausner R.D., Collins F.S., Wagner L., Shemen C.M., Schuler G.D.,
A Alschul S.E., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Subin G.M., Hoog L.,
Stapleton M., Scarcs M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Stopleton M., Scarcs M.B., Doraldo M.F., Carninci P., Prange C.,
Raha S.S., Incevellanco N.A., Poters G.J., Abramson R.D., Muliahy S.J.,
Rosak S.A., McEwar P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Rochads S., Wolley K.C., Hales S., Garcia A.M., Gay L.J., Hulyk S.W.,
Nilaloo D.K., Muzuy D.M., Soderqren E.J., Lu X., Gibbs R.A.,
Whiting M., Maden A., Young A.C., Shevchenko Y., Bouffard G.G.,
Rakaeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriquez A.C., Grimwood J., Schmutz J., Meyers R.W.,
Rodriquez A.C., Grimwood J., Schmutz J., Meyers R.W.,
Rutterfield Y.S.N., Krzywinski M.I., Skalska J., Smailus D.E.,
Chunch A., Schein J.E., Jones S.J.W., Marra M.A.;
Human and mouse cDNA sequences.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                It also stimulates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBUNIT: Monomer, dimer, trimer, tetramer and pentamer, disulfide-
linked or non-covalently associated, in homopolymeric and
heteropolymeric combinations. Can also form a complex either with
OHRP or with the aighta2-macroglobulin complex.
SUBCELDULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-89307277: PubMed-2744760;
Chen B.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
Gelinas M.E., Seeburg P.H.;
"The Juman growth hormone locus: nucleotide sequence, biology, and evolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Growth hormone hererogeneity in human pituitary and plasma.";
Purn. Res. 51 Suppl. 1:2-6[1999)
-1- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete 10F-1. It stimulates both the differentiation and proliteration of myoblasts. It also stimulated amino acid uptake and protein synthesis in muscle and other
Cooke N.E., Ray J., Emery J.G., Liebhaber S.A.; "Two distinct species of human growth hormone-variant mRNA in human placenta predict the expression of novel growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IsoId=P01242-2; Sequence=VSP_006203;
Note=No experimental confirmation available;
-!-TISSUE SPECIFICITY: Expressed in the placenta.
-!-SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                               "Cloning and nucleotide sequence of placental hGH-V cDNA."; Arch. Int. Physiol. Blockim. 96:63-67(1988).
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Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Svent=Alternative splicing; Named isoforms=2;
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IsoId=P01242-1, Sequence=Displayed;
Name=2, Synonyms=GH-V2;
                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE-89224964; P-DMed-2460050;
Tgott A., Scippo N.L., Frankenne F.,
Tgott A., and nacleotide sequence of p
                                                                                                                                                                              Biol. Chem. 263:9001-9006(1988).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=22388257; PubMed=12477932
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TISSUE-Placenta;
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Best Local 9
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RLEDGSPRTGGIFNOSYSKPDTKSHNDDALLKNYSLLYGFR
KOMDKVETFLRTVQCKSVEGSGGF -> VKVARSIPNPGAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LASRDWGEKHOGPLFSSQALFUENSPYSSFPLVNPPGLSLU
PGGEGGKWANDRGREDCPSAWPLILFLHFAEAGHWQPPDWA
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01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-203 (Rel. 41, Last, annotation update)
Growth hormone variant precursor (GH-V) (Planenta-specific growth
   The Confident 15 of
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primatos, Catarrhini, Cercopithecidae.
                                                                                                                                                                                                                                                                                                                                                                                Hormone, Placenta, Signal, Glycoprotein, Alternative splicing,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 422; DB 1; Length 217; Pred. No. 7.8e-37;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /FIId-VAR 014591,
I -> T (IN REF. 2),
7B9324698E822F96 GRC64;
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/FTId-VSP_C06263.
R -> W (IN dbSNP:5383).
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   institutions as long as
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                                                                                                                                                                                                                                                                                                                         Pfam; PF00103; hormone; 1.
PROSITE; PS00266; SOMATOTRGPIN_1; 1.
PROSITE; PS00338; SOMATOTROPIN_2; 1.
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                                                                                     EMBL, K00470; AAA38619.1;
EMBL, J03756; AAB59547.1;
EMBL, J03756; AAB59548.1;
EMBL, M34951; AAA35897.1;
EMBL; C03071; AAA52552.1;
                                                                                                                                                                               EMBL; BC020760; AAH20760.1;
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PIR; D32435; STHUV.
HSSP; P01241; 1A22.
Genew; HGNC:4262; GH2.
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                   Golos T.G. Burning M., Fisher J.M., Fowler P.D.;
"Cloning of four growth hormone/Chorionic sometomammollopin-related complementary decayribronucleic acids differentially expressed during pregnancy in the rhesus monky placenta.";
Endorrinology 133:1744-1752(1993).
-! FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and cincr tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts, it also stimulates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27 FPIIPLSWLFNTAVFRAHHLHKIAFDTYPKLEBAYLPKECKYSFLKNPQTSLCFSESIPT
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01-APR-1988 (Rel. 07, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Lactogen precursor (Choriomammotropin) (Chorionic somatomammotropin),
CSH1 AND CSH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Selby M.J., Barta A., Baxter J.D., Bell G.I., Eberhardt N.L.;
                                                                                                                                                                                                                                                                                                                                                                        -!- SUBCELLULAR LOCATION: Secreted (By similarity).
-!- TISSUE SPECIFICITY: Expressed in the placenta.
-!- SIMILARITY: BELONGS TO THE SONATOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 217;
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Pred. No. 3.9e-34;
...-errhos 8; Indels
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PROSITE; PSO0266: SOMMIOTROPIN.1: I.
PROSITE; PSO0338: SOMMIOTROPIN.2: I.
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Pfam: PF00103; hormone; 1.
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MEDLINE-85030426; PubMed=6208192;
MEDLINE-94008724; PubMed-8404617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84.3%:
84.6%;
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es 77; Conservative
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HSSP; P01241; 1HGU.
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"Analysis of a major haman chorionic somatomammentopin gene. Evidence
                                                                                                                                                                                                                                                                                                                                                                                         Liao Y.C., Smith D.H., Barrera-Saldana H.A., Gelinas R.E.
                                                                                                                                                                                                                                                                                                                                                                                                                             "The human growth hormone locus: nucleotide sequence, biology, and evolution.";
                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-83.60916; PubMed-63.60056; MEDLINE-83.60916; PubMed-63.60056; Parmera-Saldana H.A., Socolay P.H., Saunders U.F.; Parmerally distributed to Saldana H.A., Socolay P.H., Saunders U.F.; Product The Sume secretic human placental tectoden hormone.", J. Brol. Chem. 256:3787-3738(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shine J., Seeburg P.H., Martial C.A., Raxter C.D., Goodan, H.K.: "Construction and analysis of recombinant DNA for human clothering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The human growth hormone gene family: nucleotide segmences snow recent divergence and predict a new polypeptide hormone. ",
                                                                      SECUENCE FROM N.A. (GENE CSE2).
MEDLINE-87161235: PubMed-3030680.
Hirt H., Kimelman J., Birnbaum M.J., Chen E.Y., Soeburg P.H.,
Eberhardt N.E., Barra A.;
"The human growth formone gene locus: structure, evolution, and
allelic variations.".
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Li C.H.. Dixon J.S., Chang D.;
"Amino acid sequence of human chorionic somatomammutropid.",
Arch. Biochem. Nicphys. 155:95-112(1973).
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                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (GENES ISB) AND OSHI).
MEDLINE-89307277; PUDMed-2744760;
                   for two functional promoter elements.";
J. Biol. Chem. 259:13131-13138(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-83182010; PubMed-7169009;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomics 4:479-497(1989).
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                                                                                                                                                                                      DNA 6:59-70(1987)
                                                                                                                                                                                                                                                                                                                                                                                         Chen E.Y., Li
Seeburg P.E.:
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INTERCHAIN (WITH C-208 IN A DIMER).
P -> A (IN CH12).
/FIId-AVAR\_007156. SUBCELLULAR LOCATION: Secreted.
MISCELLANEOUS: THE SEQUENCE OF CSHI IS SHOWN.
SIMILARITY: BELONGS TO THE SOMATOTROPIN/PRGLACTIN FAMILY. 81.1%; Score 381; DB 1; Length 217; 62.0%; Pred. No. 1.4e-32; 8; Indels Sierwood L.M., Handwerger S., McLaurin W.D., Lanner M.; "Amino-acid sequence of human placental lactogen."; Nature New Biol. 233:59-61(1971). Sherwood L.M., Handwerger S., McLaurin W.D., Lanner M.; Nature New Biol. 235:64-64(1972). SDD -> BBS (IN REF. 9). 235B0DC7A713F431 CRC64; 6) I -> T (IN REF. 9).
MISSING (IN REF. 9).
MISSING (IN REF. 9). IS -> L (IN CSH2) /FTId\*VAR\_007167. Hormone, Placenta, Multigene family, Signal 8; Mismatches 64 NREETQOKSNLELLRISLLLIQSWLEPVQ 92 LACTOGEN Pfam: PF00103; hormone: 1.
PROSITE; PS00266; SOMATOTROPIN\_1; 1.
PROSITE; PS00338; SOMATOTROPIN\_2: 1. MIM: 150200: -. GO: GO:0007555; Fipregnamcy; TAS. InterPro; IPR061400; Somatotropin. EMBL: V00573; CAA23836.1; EMBL: V00209; AAA98747.1; EMBL: V00201; AAA52115.1; EMBL: M1584; AAA52116.1; EMBL: J00118; AAA5255.1; EMBL: G00271; AAA525.1; EMBL: B0009221; AAA52071.1; EMBL: B0009221; AAA52071.1; -Ψ. INTERCHAIN DISULFIDE BONDS 136 25920 Best Local Similarity 62.03 Matches 73; Conservative 26 217 215 215 215 215 3 84 95 116 Genew: HGNC:2440; CSH1. Genew: HGNC:2441; CSH2. 105 PIR; A26449; A26449 PIR; C32435; LCHUC. 84 95 116 134 217 AA; HSSP; P01241; 1A22 104 DISULFID DISULFID DISULFID CONFLICT CONFLICT CONFLICT SEQUENCE CISULFID Cuery Match ERRATUM. CONFLICT VARIANT VAR! ANT SIGNAL

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1 FPAMPLSSLFANAVLRAQHILHELAADIYKEFERAYIPEGORY-FLONAQSIGGESEVIPT 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Osipova T.A., Bulatov A.A., Pankov Y.A.;
"Structural studies of tryptic peptides from large cyanogen bromide fragments of sei whale (Balalnoptera borealis) somatotropin."; iragments of sei whale (Balalnoptera borealis) somatotropin."; Bioorg. Khim. 4:1589-1599(1978).

-:- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 PPTIPLSHLFDNAMLRAHRIJHQLAFDTYQEFEEAYIPKEÇKYSFLQNPQTSLSFSRSIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Linzer D.T.H., Talamantes F., "Nucleotide sequence of mouse prolactin and growth hormone mRNAs and expression of these mRNAs during pregnancy.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                          Balgenophera borealis (Sei whale).
Bukaryota, Metazoa, Chordata, Craniata: Vertebrata, Euteleostomi.
Mammalia: Butheria: Cetartiodactyla, Cetacea, Mysticeti.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1; Length 190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -:- SUBCELLULAR LOCATION: Secreted.
-:- STAILENTY: BELCNGS TO THE SCMATOFROPIN/PROLACTIN FAMILY.
PIR: PRO14:0: PMO14.4.
HSSP: P01241: 1AXI.
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BY SIMILARITY.
09FBFF60B14A75D6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-83000569; PubMed=7115813;
Yudaev N.A., Pankov Y.A., Bulatov A.A., Osipova T.A.;
'Amino acid sequence of seiwhale somatotropin.";
Blokkiimiia 47:1059-1069(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65.4%; Score 307.5; DB 1
67.0%; Pred. No. 5.2e-25;
Live 14; Mismatches 15
Cleared (Rel. 27, Created)
61-667-1993 (Rel. 27, Last sequence update)
61-667-1993 (Rel. 21, Last sequence update)
Somatolropin (Growth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 06, Last sequence update)
(Rel. 41, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00103; hormone; 1.
PRCSITE: PS00266; SCMATOTROPIN_1; 1.
PRCSITE; PS00338; SCMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; 1PR001400; Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-85261358; PubMed-2991252;
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                                                                                                                                                                                                                                              Raluenopteridae, Baldenoptera.
NCBI_Tax1D=9768;
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190 AA; 21835 MW;
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rest Local Similarity 67.09
Matches 61, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSILE; rocci
Hormone: Pituitary.
52 :63
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28-FEB-2003
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P06880;
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SONA_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27 FPAMPLSSLFANAVLKACHUHQLAADTYKEFERAYTPEGGRYS-IQNAQTAFCESETIFA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Endocrinology 129:2965-2971(1991).

-i- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete (GF-I). It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and proliferation synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Selve
                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Cramiata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
Mesocricetus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE-92063859; Pubmed-1954881; Southard J.N., Sanchez-Jimenez F., Campbeil G.T., Talamantes F., Southard J.N., Sanchez-Jimenez F., Campbeil G.T., Talamantes F., messenger and expression of hamster prolactic and growth hormone messenger RNAs."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE SONATCHROPIN/PROLACTIN FAMILY.
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BY SIMILARITY.
3869GE*2AB6F1166 CRU64:
                                                                                                                                                                                                                                              01-0CT-1954 (Rel. 30, Greated)
01-0CT-1994 (Rel. 30, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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                                89 NMEETQOKSNIBLIBISHIJJESWLEPVR 117
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                                                                                                                                                                                                                                                                                                                                               Somatotropin precursor (Grewth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mesocricetus auratus (Golden hamster).
   THE THE THE
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InterPro; IPR061400; Somutetropin:
Pfam; PF00103; hormone; 1.
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                                                                                                                                                                                       STANDARD;
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189
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216 AA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID-10036;
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P33092;
                                                                                                                                                                                       SOMA_MESAU
P37886;
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SIGNAL

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Matches Best

g ò RESULT 1: SOMA\_BALBO

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SEQUENCE OF
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                                                                                                                                                                                                                hormone.
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                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration decreen the SWISS institute of Bhoinformatics and the FWAN citation. the European Richformatics Institute. There are no restrictions on its use, by non-prefit issilations as long as its content is in no way.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 FPTIPLSRLFONAMIRA HRIHQIAFOTYQEFEBAYIPKHQKYSFLONPQTSISFSHFT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to serete 1091. It stimulates both the differentiation and politeration of myob mass. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l; Gaps
                                                      Das P., Meyer i., Sepfert (...M., Brockmann G., Schwerin M.) "Structure of the growth bormone-encoding gone and its promoter in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Equús caballus (Borso).
Eukaryota, Metazoa: Chordata, Craniata, Vertebraba, Euleleostom.;
Mammalia, Butheria: Perissodactyla: Equidae: Equis.
                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONSS TO THE SCMATOIROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64.8%; Score 364.5; DB 1; Tength 216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                   98656A3AE25D65FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. 1.2e-24:
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01-NOV-1995 (Rel. 32, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
GMI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Pituitary;
MEDLINE-94265171; PubMed-8205392;
Ascacio-Martinez J.A., Barrera-Saldana H.A.;
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BY SIMILARITY.
BY SIMILARITY.
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PROSITE: PS00266; SOMAIOTROPIN_:: J.
PROSITE: PS00338; SOMAIOTROPIN_2: 1.
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Biol. Chem. 260:9574-9579(1985)
                                                                                                                                                                                                                                                                                                            PTR, B23911, STMS.
HSSP, P01246, 1337.
MGD, MGI:95707, Gh.
InterPro, IPR001400; Somarotropin.
                                           MEDLINE-96194803; PubMed-8547448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 216 AA; 24716 MW;
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EMBL; 246563; CAA86658.1; -:
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                                STRAIN FZIDU: TISSUE=: ver
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SIGNAL 1 26
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59, Conservative
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                                                                                       Gene 169:209-213(1996).
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                      SEQUENCE PROM N.A.
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SOMA_HORSE
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Flocken, J. 1991.9-24(1968).

FLONCTION: Plays an important role in growth control. Its major role in stimulation body growth is to stimulate the liver and cher ilsases. To secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid upcake and proles, synthesis in muscle and other
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                                                                                                                                                                                                                                                                                                                                                                                         Santome J.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-68368390; PubMed-4876100;
Cliver L., Hartree A.S.;
"Amino acid sequences around the cystine residues in horse growth
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-- SUMILARITY: BELONIS TO THE SOMATOTROPIN/PROLACTIN FAMILY
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                                                                                                                                                                                                                                                                                                                   PRELIMINARY SEQUENCE OF 27-216.
MEDIINE—74020362: PubBed=4447849;
Zakin M.M. Poskus E., Dellacha J.M., Paladini A.C.,
"The amino acid sequence of equine growth hormone.";
"Sequence of a cDNA encoding horse growth hormone.";
Gene 143:299-300(1994).
                                                                                                                                                  Zakin M.M., Poskus E., Langton A.A., Ferrara P.,
Deilacha J.M., Paladini A.C.;
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64.8%; Pred. No. 2e-24;
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                                                                                                                                                                                                                        "Primary structure of equine growth hormone."; Int. J. Popt. Protein Res. 8:435-444(1976).
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PROSITE: PS00338; SCMATOTROPIN_2: 1.
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                                                                                                                           MEDLINE=77005410; PubMed:965151;
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HSSP; P01246; 1BST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FESS Lett. 25:77-82(1972).
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189
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216 AA:
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nes 59; Conserv
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Enkaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalla; Butheria: Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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MEDLINE=78071760; PubMed-339105;
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169
214
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78 1
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216 AA;
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Matches 59; Conserv
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HSSP; P01246; IBST.
InterPro; IPR001400
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                               Nammalla; Euthern
NCBI_TaxID=10116;
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   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMES cutstation the European Hoinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for conforcial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                     Gene 163:253-256(1995).

-!- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
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                                                                                                                                                                                       SEQUENCE FROM N.A. STRAIN-New Zealand white; MEDLINE=9601643; PubMed-7590276; MeDLINE=96011643; PubMed-7590276; Meallis O.C., Wallis M.; "Cloning and characterisation of the rabbit growth hormone-escuding
                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertobrasa, Euteleostor,,
Mammalia, Eutherla, Lagomorpha, Deporidae, Orymolayus,
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-!- SIMILARITY: BELONGS 10 THE SOMATOTROPIN/PROLACTIN FAMILY.
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64.8%; Pred. No. 2e-24;
Live 14; Mismatches 17; Indels 1;
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SCHATGTROPIN.
BY SIMILARITY.
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6EC19748199F9375 CRC54.
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21-JUL-1986 (Rel. 01, Last Sequence update)
28-FEB-2003 (Rel. 41, Last innotation update)
Somarctropin precursor (Growth hormone).
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                            01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2003 (Rel. 41, Last annetation apdate
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216 Ah
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                                                                             Somatotropin precursor (Growth hormone)
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InterPro: IPR01400; Somatotropin.
Pfam; PF50103; hormcne; I.
PR0181S; PR00846; SCMATOTROPIN.
PROSITE; PS00256; SCMATOTROPIN.
PROSITE; FS00338; SCMATOTROPIN.
                                                                                                             Oryctolagus coniculos (Rabbit).
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Bes 59; Conservative
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STANDARD
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78 1
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P01244;
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             P46437
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                                                                                                                                                                                                                                                                                                                                                           Seeburg P.H., Shine J., Martial J.A., Baxtor J.D., Goodman H.M.; "Nucleotide sequence and amplification in bacteria of structural gene for rat growth hormone.";
SEQUENCE FECM N.A.

MEDINE-82059526: PubMed-6272224;
Page G.S., Smith S., Goodman H.M.;
PubM sequence of the rat growth hormone gene: location of the 5'
"UNA sequence of the growth hormone mRNA and identification of an internal gramposon-like element.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Liver;
MEDLINE-82060155; PubMed-6946433;
Barta A., Richards R.L., Baxter J.D., Shine J.;
Primary structure and evolution of rat growth hormone gene.";
Proc. Natl. Acad. Sci. U.S.A. 78:4867-4871(1981).
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BY SIMILARITY.
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F -> L (IN REF. 2 AND 4).
W; CABF49DC0B2A226C CRC54:
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14; Mismatches
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                                                                                                                                                                                                                               Nucleic Acids Res. 9:2087:2164(1981).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-Sprague-Dawley;
MEDLINE-96056604; PubMed-8521139;
Rohn W.M., Weigent D.A.;
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Pfam: PF00103; hormone: 1.
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Qy 2 PPTIPSKLPNAMLRAHKHQLAFDTYQEEEAYIPKBQXYSFLQNEGTSLSPESIFF 61
1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1 :1.1 | 1
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Search completed: September 15, 2003, 12:01:29 Job time : 8.57348 secs

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## ALL GNMENTS

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27 FPTIPLSRLLDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLONPQTSLCFSESIPT 86
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                                                                                                                                                                            Eukaryota: Metazoa: Chordata: Craniata; Vertebrata: Buteleostomi;
Mammalia: Eutheria: Primates: Platyrrhini: Cebidae: Atolinae: Ateles:
NC31_Tax1D=9509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                            Revol A., Esquivel D., Santiago D., Barrera-Saldana H.;
Revol A., Esquivel D., Santiago D., Barrera-Saldana H.;
"Independent duplication of the growth hormone gene in three Arthropoidean lineages.";
Submitted (APR-201) to the EMBL/GenBank/DDEJ databases.
EMBL: AF374234; AAL72286.1;
InterPro, IPR001400; Somatotropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                             92.6%; Score 435; DB 6; Length 21
92.3%; Pred. No. 3.5e-41;
""" """marches 3; Indels
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                                                                  01-WAR-2002 (TrEMBLED), 20, Created)
01-WAR-2002 (TrEMBLED), 20, Last sequence update)
01-WAR-2003 (TrEMBLED), 23, Last annotation update)
                                                                                                                                                           Ateles geoffroyl (Black-handed spider monkey).
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                                 217 AA
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PKOSITE; PS00266; SOMATOTROPIN_1; 1.
PKCSITE; PSC0338; SOMATOTROPIN_2; 1.
SEQUENCE 217 AA; 24894 MW; 425829
                                   PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 FPTIPLSKLEDNAMLRARRLYGGAYDYYGEFBBAYTLKROKYSFLONPOTSLOFSESTIT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Midprendedy placenta; MEDLINE-9406874; PubMed-840467; GOLOS F.G., Durning M., Fisher J.M., rowler P.D., GOLOS F.G., Durning M., Fisher J.M., rowler P.D., complementary decayribonacieic acids differentially expressed differentially expressed differentially expressed differential decayribonacieic acids differentially expressed differential programmy in the rhesus monkey placenta."; Endocrinology 13:1744-1752(1993).

EMBL: L16554: AAA18841.1; ...
HSSP; P01241; 1AXI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Boguszewski C.L., Svensson P.A., Jansson T., Clark K.,
Carlsson L.M.S., Carlsson 3.,
"Cioning of two movel growth hormone transcripts expressed in luman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Macaca mulatra (Rhesus macaque).
Buraryoula Motacas Chordana: Crantata, Vestebrata; Entelhostomos
Mammalia: Entberta; Primates: Canarroini: Geroopilbooidae:
Ceroopilhecingo: Macaca.
                                                                                                                                                                                                                                                      Eukaryota, Metazoai Chordaia: Craniata: Vertebiata: Buteleostomi:
Mammaila: Eutheria: Primatos: Catarrhibi; Homibidae: Bomo:
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Pfam, PF00103: hormone; ...
PROSITE: PS00366; SCMATCTROPIN_1; 1.
PROSITE: PS00338; SOMATCTROPIN_2; 1.
PROSITE: PS00338; SOMATCTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245 AA: 27101 MW; 14CC7F8CD7509108 CRC64:
                                                                                                   01-JAN-1998 (TrEMBirel, 65, Greated)
01-JAN-1999 (TrEMBirel, 65, Last Segionov update)
01-DEC-2001 (TrEMBirel, 19, Last annotation update)
01-DEC-2001 (TrEMBirel, 19, Last annotation update)
HOB-CONTRACT PROCESSION HOBEN
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Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          placenta.";
J. Clin. Endocrinol. Metab. 83:2678-2865(1998).
EMBL; AF006061; AAB71829.1: -.
HSSP; P01241; 1A22.
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Pfam; PF00103; hormone: 1.
PROSITE; PS00266; SOMATOTROPIN_1; 1.
                                                  P.K.I.
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MEDLINE-98373737; PubMed-9709963;
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01-NOV-1996 (TYEMBLYG), 01
01-MAR-2003 (TYEMBLYG), 23
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                                                        PRELIMINARY:
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                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
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RESULT 2
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                                                                                                                                                        28 PSVPLSRLFDUIRMQAGRENQLAFDTYQEFEKTYIPKEKKHSLMGNPQASFCFSESIPIP 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 PTIPLSRIPDNAMLKASREHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPTP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Golos T.G., Durning M., Fisher J.M., Fowler P.D., "Closing of four growth hormone/chorionic somatomamotropin-related complementary deoxyribonucleic acids differentially expressed during pregnancy in the rheeus monkey placenta.";
Endocrinology 133:1744-1752(1993).
EMBL. 116583, AAA18440.1;
InterPro; IPR001400; Somatotropin.
                                                                             Gaps
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1-NOV-1956 (TEMBL:el. 01, Last sequence update)
01-MAK-2003 (TEMBL:el. 23, Last annotation update)
Somatctropin 2 precursor (Growth hormone 2) (Fragment).
Macaca mulatta (Rhesus macadue).
Eukaryota, Metazoa, Chordata: Craniata; Vertebrata; Euteleostomi;
Mammalia; Euthoria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordatá, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Cercopithecidae,
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                          Length 217;
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indels
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23, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                              212 AA
                                                                        8; Mismatches
                                                                                                                                                                                                                             63 SNRSETÇQKSMI,ELLRISILLIQSWI,EPVQ 92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00103; hormone; 1.
PRCSITE; PS06338; SCMATOTROPIN_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
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MEDilNE-94008724; Pubmed-8404617;
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                        84,5%;
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TISSUE=Midpregnancy placenta;
                     0mery Match
Best Local Similarity 85.39
Matches 75, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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01-MAR-2003 (TrEMBL:el.
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PRCSITE: PS00338; SCMATOTROPIN_2; 1.
SEQUENCE 217 AA; 24994 MW; 39FAACDDB6B2E951 CRC64;
                                                                                           Best Local Similarity 82.0
Matches 73; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 75.8
Matches 69, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCB1_Tax1D-9509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Growth hormone.
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COWND9
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                                                                                                                                                                                                                                                                                                                                                                                                         3 PTIPLSRLFONAMLRABERCHOLAFOTYOBEBBAYTPKFCKYSFCHWFGTSLSFSSKLPTE
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01-NOV-1996 (TrEMBirel, O1, Last Sequence applate)
01-MAR-2003 (TrEMBirel, 2:, Last annotation update)
Chortonic somatomanmetropin CS-2 (Chortonic somatomammetropin CS-2)
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           Golos T.G., Durning M., Fisher J., Towler P.L.,
"Cloning of four growth hormone-Cohorionic somatomamontropin-related complementary deoxyribonacleic acids differentially expressed during pregancy in the rhesus monkey placenta."; Endocrinology 133:1744-1752(1993).
Bridocrinology 133:1744-1752(1993).
HSSP, P01241: 1AXI.
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MEDIATR-89307277; PubMed-2744760;
Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A., Selleas P.E.
Seeburg P.H.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "The human growth hormone locus: nucleatide sequence, biology, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE*91102558: PubMed*:980158:
Mencak-Jones C.L., Phillips J.A. 111.:
"Rot spots for growth hormone done deletions in homologous regions
outside of Alu repeats.";
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Mammatia, Butheria, Primates, Catarreina, Rominidae, Homo,
                                                                                                                                                                                                                                                                                                                      length 213;
                                                                                                                                                                                                                                                                                                                                                       5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.:
Submitted (JUL-2002) to the EMBL/GenBank/DVBL databases.
EMBL, 703071: AAA52553.1;
EMBL, BO022044: AAH22044...;
EMBL: BC025965: AAH35965.;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-2062) to the EMBL/GenBank/DUEJ databases
                                                                                                                                                                           InterPro; IPR001400; Somatotropin.
Pfam: PF00103; Normoue: 1.
PRINTS; PR00834: SOMATOTROPIA.
PROSTE; PS00338: SOMATOTROPIA.
SEQUENCE 217 AA: 24942 MW: FFSAA8915131F231; CP064:
                                                                                                                                                                                                                                                                                                                      84.3%; Score 555; DB 6;
82.2%; Pred. No. 8.9e-37;
                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 62.2%; Pred. No. 8.9e-
Matches 74; Conservative II: Mismatches
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PROSITE: PS00266; SOMATOTROPIN_1; 1.
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Pfam: PF00103: Normone; 1.
MEDLINE-94008724; PubMed-6404617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Science 250:1745-1748(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genomics 4:479-497(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ISSUE-Placenta;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strausberg R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    evolution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                014407;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                29 TVPLSRLEDHAMLQAHRAHQLAIDTYQEFEETYIPKDQKYSFLHDSQISFCESDSIPTPS 88
                                                                                                                  4 IIPLSRLFUNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPTPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ateles geoffroyi (Plack handed spider monkey).
Enkaryota, Metazosi Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Platyrrhini: Cebidae; Atelinae; Ateles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eutcleostomi;
                                                          .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROVINCE FROM N.A.

Revol A., Esquivel D., Santiago D., Barrera-Saldana H.;

Rocoldent diplication of the growth hormone gene in three Antiropoidean lineages.";

EMBL, AF374235: AAL72287.1;

EMBL, AF374235: AAL72287.1;

TitlerPoo. IPR001400: Schartorropin.

Pfan: PF00103: Jordone: 1.

FRINTS: PR0056: SCMATOTROPIN.

PROSITE: PS00266: SCMATOTROPIN.

PROSITE: PS00266: SCMATOTROPIN.

PROSITE: PS00266: SCMATOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74.0%; Score 348; DB 6; Length 217; 75.8%; Pred. No. 2.4c-31; Live 8; Mismatches 14; Indeis
  Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Eutele
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25293 MW; 741745A1B75C653E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0:-MAR-2002 (TrEMBLrel, 20, Created)
0:-MAR-2002 (TrEMBLrel, 20, Last sequence update)
0:-OCT-2002 (TrEMBLrel, 22, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01.JAN-1996 (TrEMBLrei. 05, Created)
1-JAN-1998 (TrEMBLrei. 05, Last sequence update)
01.JCN-1902 (TrEMBLrei. 21, Last annotation update)
Placental growth hormone 20kDa isoform precursor.
81.1%; Score 381; DB 4; 182.0%; Pred. No. 4.4e-35; iive 8; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PENKEEVIAKSSLEILHISILITQSWIEPVQ 117
                                                                                                                                                                                                                                                                                                                                                                                                                            217 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 PSNRBBIQQKSNLELLRISILLIQSWLEPVO 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    202 AA
                                                                                                                                                                                                                         PRI;
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MEDLINE-98373737; PubMed-9709963;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota: Metazoa: Chordata;
Mammaila: Eutheria: Primates;
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us-09-423-100-2.rspt

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ehrenbergi, growth hormone.;

J. Mol. Endocrinol. 22:29-36(1999).

EMBL, A1005819; CAA06716.1; -..

HSSP: POLGATI: LAXI.

InterPro. IPR001400; Somatotropin.

Pfam: PF00103; hormone: 1.

PRINIE: PR00836; SOMATOTROPIN.

PROSITE: PS00338: SOMATOTROPIN.;

PROSITE; PS00338: SOMATOTROPIN.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Interpro; IPR001400; Somatotropin.
Pfam; PF00103; hormone: 1.
PRINTS; PR00636; SCMATOTROPIN.
PROSITE; PS00266; SOMATOTROPIN. 1; PROSITE; PS00338; SOMATOTROPIN. 2; 1.
              PRI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth hormone precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
          PRELIMINARY:
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27
216 AA;
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                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=30637:
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                                                                                                                                                                                                                                                                                                                      Nannospalax
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              SO DR RESERVANT DR BENEFIT DE SO DE 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 FPTIPLSRLFUNAMIRAJRLHQLAFDTYQEFEEAYIPKEGKYSFLONPQTSLSFSES;PT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GHLP5.
Callithrix jaccius (Common marmosel).
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Extelecsion::
Mammalia: Eutheria: Primates: Platyrrhini: Callitrichidae: Callithrix.
NCBI_TaxID=9483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mallis O.C., Wallis M.;
Wallis O.C., Wallis M.;
Calistisation of the GH gene cluster in a new world monkey, the "Characterisation of the GH gene cluster in a new world monkey, the "Characterisation of the GH.";
J. Mol. Endocrinol. 3:6-0(2002).
Famer And Sell, Canadon. 1:6-0(2002).
Interpo. IPRO9100. SomatoLopin.
Pfam. P200103. Acronom.
PRO9103. Acronom.
PRO9103. SOMATOTROPIN.
PROSTIE: PSC0338: SOMATOTROPIN.
                                      Carlsson L.M.S., Carlsson B.: "Cioning of two newel promote transcripts expressed in homen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
71.5%; Score 336.5; DH 4; Length 202;
Best Local Similarity 76.9%; Pred. No. 4.4c-50;
Matches 70; Conservative 3; Mismatches 3; Indels 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SROWIE HORMONE-LIKE FROTEIN F.
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68.9%; Pred. No. 5.9e-28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              SIĞNAL 1 26 POTENTIAL.
SEQUENCE 202 AA; 23128 MW; 36B64D011A919706 CRC64;
          Svenssor P.A., Jansson J., Tark R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                  FIGURE 5. ACCOUNTING 1. Metab. 83:2878-288(1958).

EMB5. AF050500. AAR11826.1;

1958.) POL341: 1A22.

PIGNE: PR00133: hormone: 1.

PR0115: PR00355: SOMATOTROPIN.

PR0SITE: PS00266: SOMATOTROPIN.1:

PROSITE: PS00368: SOMATOTROPIN.1:

PROSITE: PS00388: SOMATOTROPIN.1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT; 217 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 PSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63 SNREETQGKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-007-2002 (TrEMBLRel, 22. Created)
01-007-2002 (TrEMBLRel, 22. Last sequenc
01-MAR-2003 (TrEMBLRel, 23. Last annotat
Growth hormone-like protein 6 precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL
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27 217 S
217 AA; 25177 WW;
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Matches 62, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
Boguszewski C.L.,
                                                                                                         placentá.";
J. Clis. En
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Bukaryota: Metazoa; Chordata; Craniata: Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Cetacea; Odontoccti; Delphinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 PPTIPLSRLFUNAMERAHRLHQLAFDTYQEFEEAYIPKEQKYSFLONPQ1SLSFSSSIPT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. PURMED-1924177; BEDLINE-99124665; PURMED. NB-1012465 A., Nevo E., Wallis M.: Licupis A., Nevo E., Kallis M.: "Clening and characterisation of the gene encoding mole rat (Spalax
51-A3G-1998 (TrEMBLREI, 57, Created)
61-A3G-1998 (TEMBLREI, 67, Last sequence update)
61-A3G-2603 (TEMBLREI, 23, Last annotation update)
51-AME-2603 (TEMBLREI, 23, Last annotation update)
52-AME, Hornoon precursor.
52-AME (TEMBLREI)
53-AME (TEMBLREI)
53-AME (TEMBLREI)
53-AME (TEMBLREI)
54-AME (TEMBLREI)
54-AME (TEMBLREI)
55-AME (TEMBLREI)
55-AME (TEMBLREI)
56-AME (TEMBL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (De) phinus delphis).";
Submitted (JUN-2002) to the EMBL/GenBank/DDRJ databases.
EMBL; AJ492191; CAD37292.:;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 POTENTIAL.
216 GROWTH HORMONE.
24627 MW; BEABBA523BA0ADFE CRC64;
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01-001-2002 (TrEMELTEL, 22, Last sequence update)
01-MAR-2003 (TrEMELTEL, 23, Last annotation update)
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GROWTH HORMONE.
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Pfam; PF00103; hormone; 1.
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Matches 59; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID-9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Placenia;
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095205;
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                                                                            2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFERAYIPKEQKYSFLQNP01SLSFSES1PT 6.
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27 FPAMPLSSLFANAVIRAGHADLAADTYKEFERAYIPSGCKYS-TÇNYGAAFCESETTPA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 FPTIPLSKLFDNAMLKAHRLHQLAFDTYQEFHHAYIPKBØKYSFLQNPQTSLSFSESIFT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                            Aliuropoda melanoleuca (Giant panda).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Esteleostomi:
Mammalia: Buthoria, Carnivora, Pissipedia: Orsidae, Alluropoda.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Graniata, Vertebrana, Enteleostomi,
Mammalia, Eutheria, Rodentia, Schurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. Nigbhaber S.A.; Nguyen T.N.K., Liebhaber S.A.; "Mouyen T.N.K., Liebhaber S.A.; "Mouse Growth Hormone Locus: Nucleofide Schnodor and Phylonemetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 64.1%; Score 201.5; DR 6: Legal): 228: Best Local Similarity 64.8%; Pred. No. 4.38-26;
                        64.18; Score 301.5; DB 6; Length 216; 64.88; Pred. No. 4.36-26; Live 14; Mismatches 17; Indels 1
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
TISSUE-Pituitary;
Liao M., Zhu M., Zhang A.;
"Clonding and expression of GDNA encoding arowal hormone from
Alluropoda metapoleuca.";
Submitted (AUG-2002) to the EMBL/SenBank/DDNI Jatabasex.
EMBL: AF540386: AAN77228.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14; Mismatches 17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Analyses.";
Submitted (AUG-1995) to the EMBL/GenHack/PCHJ catabases.
EMBL: 034362; AAC99968.1; -.
HSSP: F01241; IAXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL 1 26 POTENTIAE.
SEQUENCE 216 AA; 24383 MW: 44EC17EC445CB056 CRC64;
LEC467A84CCFEB0Z CRC64;
                                                                                                                                                                                                                                             01-MAR-2003 (TribMBLrel. 23, Greated)
01-MAR-2003 (TribMBLrel. 23, Last sequence appart)
01-MAR-2003 (TribMBLrel. 23, Last annotation update)
Growth hormone precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          i3, Last sequence update)
23, Last annotation update)
                                                                                                                                             62 PSNREETOOKSNLELLRISLLLIQSWLEPVO 92
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 24509 MW;
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                                                   59; Conservative
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01-MAR-2003 (TrEMBLrel.
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 Zie AA;
                                       Best Local Similarity
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SEQUENCE
                         Query Match
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Q9R2C3:
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Lacriax M.C., Devinoy B., Servely J.L., Puissant C., Kann G.;
Lacriax M.C., Devinoy B., Servely J.L., Puissant C., Kann G.;
Lacriax M.C., Devinoy B., Servely J.L., Puissant C., Kann G.;
and cellular localization of the protein.";
Endocarinology 137:4886-4892(1996).
EMBL: U49663; Aact6679-1;
HSSP: P01241: 1AXI.
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Mamma.ia; Eutheria, Cetartiodactyla, Kuminantia, Pecora, Bovoidea,
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01.0CI'2000 (TrEMBLIEL 15, Last sequence update)
01.MAR-2003 (TrEMBLIEL 23, Last annotation update)
Growth hormone precursor.
Cavia porcellus (Guinea pig).
Eukaryota, Metazoa: Chordata; Craniata: Vertebrata; Euteleostomi;
                                                                                                                                                                                                        . '
                                                                                                                                           63.5%; Score 298.5; DB 11; Length 216; 63.7%; Pred. No. 9.4e-26; artive 14; Mismatches 18; Indels 1;
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PRINTS: PRO0836; SOMAICTROPIN.
PROSITE; PS00266; SOMAICTROPIN.1; 1.
PROSITE; PS00338; SOMAICTROPIN.2; 1.
SEQUENCE 216 AA; 24682 MW; FC2A06DA02536B18 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61-F28-1997 (TrFMBLrel. 02, Created)
01-F28-1997 (TrFMBLrel. 02, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
placencial growth Ecrmone (Fragment).
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Pfam; PF00103; Normone; 1.
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Pest Jocal Similarity 63.7%;
Matches 58; Conservative
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Mammalla, Butheria, Rodentia, Hystricognatht, Cavildae, Cavia

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2 FPT (PLSRLF) DNAME, RAERLHQLAFDTY QEFERAY TEREGKYSFLON PQTSLSFSES [FT 4]
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                                                                                                                              SEQUENCE FROM N.A.

Odorico D.M., Fuller E.J., Herinaton A.C.;
Cloning and sequence of quintu pig growth hermone (38),";
"Cloning and sequence of quintu pig growth hermone (38),";
Submitted (FES. 2006) to the BME./Genbeck/Intel databases.
BME. AF23883 AAF364091;
FNBE. PROJECT 10 NGO 10 NG
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CHAIN 27 216 SROWIH HORMONE.
SEQUENCE 216 AA; 24822 PW; 45996BEL19B080D3 CR054:
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225.942 Million cell updatus/sec
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| SIDSI/gcgdala/geneseg/genesegp.emb./AA1999.DAI:
| SIDSI/gcgdala/geneseg/genesegp.emb./AA1001.DAI:
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GerCore version
Copyright (c) 1993 + 2003
                                                                                                      using sw model
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Human pro-insulin Human proinsulin p Sequence encoded 5 Sequence of prepro Sequence of human Human preproinsuli Human insulin AC Human insulin sed Human proinsulin iduran proinsulin sed man proinsulin sed man proinsulin sed Human proinsulin sed Human proinsulin sed Human proinsulin secretory cell lin Human proproinsul secretory cell lin Human insulin Human insulin Ho
     Proinsulin protein
Modified human ins
hpl. Homo sapiens
                          Synthetic proinsul
Human proinsulin #
Human proinsulin p
                                                                                                                                MWPsp-MWPmpl0-(His
Human proinsulin a
Human preproinsuli
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Human proinsulin p
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Human Met-Arg proi
Human Met-Tyr proi
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Human preproinsuli
Human preproinsuli
sequence encoded b
                hpI. Homo sapiens
Yeast alpha-factor
                                                                                                                           WWPsp-MWPmp10-Met
                                                                                                                                                                 Human Met-Phe
                                                                                                                                                                                                                                                                                                                                                              /note- "H or a chemically or enzymatically cleavable AA residue or peptide residue"
                                                                                                                                                                                                                                                                                       Insulin precursor; connecting peptide; diabetes; hormone.
                                                                                                                                                                                                                                                                                                                             31..65
//abel= connecting peptide
                                                                                                                                                                                                             ALIGNMENTS
                                                     AAP10042
AAP10053
AAP46309
AAPC6608
AAB26145
AAB36144
AAX70366
                                                                                                                           AAY59788
AAY69787
AAW81856
AAY53589
AAW81857
     AAR32367
AAR07682
AAR33855
                     AAR20467
AAP90102
AA017830
                                     AAY08004
AAR68898
                                                                                                AAG65677
AAE10337
                                                                                                           AAB35424
ABG31590
                                                                                                                                                      AAR39574
AAR39575
                                                                                                                                                                      AA017831
AAY08005
                                                                                                                     ABG60634
                                                                                                                                                                 AAR39576
                                                                                                                                                                                                                                                                            Sequence of human insulin precursor.
                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                       AAP43829 standard; Protein; 85 AA
                                                                                                                                                                                                                                                                                                                  1..30
/label- chain B
                                                                                                                                                                                                                                                                                                                                        56..86
/label= chain A
                                                                                                                                                                                                                                                                                                                                                         /label - F-NH2-R
                                                                                                                                                                                                                                                                                                                                                                                               /label- N-OH
     (updated)
(first entry)
                                                                                                                     Disulfide bond
Disulfide bond
Disulfide bond
Modified-site
                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                             25-MAR-2003
03-AUG-1992
Peptide
                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                             RESTLT : AAP40829
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1 FVNOHLCGSHLVEALYLVCGERGFFYTFKTRREAEDLQVGQVELGGGPGAGSLQPLALEG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents a human insulin precursor comprising insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New chimeric proteins containing buman growth hormone fragment, used particularly for the production of human insulin
                                                                                                                                           A-chains linked via amino acid chain contg. I or more glycosylation sites, for prepo. of insulic in langal delis
                                                                                                                                                                                                                          LNA sequences encoding itsulin precursors of formula H-Pg-A. where and A represent B- and A-chains of insulin respectively, and Pg represents a modified C-Peptide or any number of amino acids comprising at least one glycosylation consensus site, can be inserted into expression vectors which in turn can be used to transform fungal host cells. The fungal cells are then cultured and the insulin expressed in such cells can be harvested.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Insulin: precursor: growth hormone: chaperone: intramolecular:
                                                                                                                             DNA encoding human insulin precursors - which comprise B- and
                                                                                                                                                                                                                                                                                                                                                                                              Length 86;
                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                               Van DEN HONDEL CAMJUS
                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 463; DB 17;
100.0%; Pred. No. 8.4e-43;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TONG ) TONGHUA GANTECH BIOTECHNOLOGY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure, Figure 1, Ropp, English
                                               Valinger R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human insulin precursor, SEQ ID 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 10: Fage 29: 46pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
(MESTZ) MESTRIC S.
(PLIV.) PLIVA PHARM & CHEM FAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY42858 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WC-CN00052
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                                                                                            N-PSDB; AAT17830, AAT17831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                               86; Conservative
                                             Punt PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-610839/52
                                                                           WFI: 1996-129917/14
                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                  86 A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
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                                               Mestric S,
                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                               ery Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 FVNQHLCGSHLVEALYLVCGERGFFYTPKIRREAEDLQVGQVELGGGFGAGSLQPLHES 60
                                                                                                                                                                                                                                                                                                                                         The inventors claim a method for the prepart of an insulin procursor in which the A-chain and 5-chain are joined through a connecting peptide. Other the A-chain at the aminotarous of A-1 to the B-chain at the carboxyl group of A-1 to the B-chain at the carboxyl group of 5-30. The method is pref. for the prepr. of human insulin precursor (see AAPA6829). The SOS of the connecting peptides of a number of species are given (see AAPA6829, AAPA6830-33).
(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0: Gaps
                                                                                                                                                                                                                                                             Insulin precursor produ. from linear S-sulphonaic and mercaptan in single step without separate oxidn_{\rm s}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Insuling transformations gere expression; fungic fungal cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%, Score 463; DB 5; Length 86; 100.0%, Pred, No. 8.46-43; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A-chain; C-chain; clycosylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 SLOKRGIVEQCOTSTCSLYQLENYON 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 SLOKRGIVEGCOTSTOSLYQLENYON 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Quelifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR84061 standard; Protein: 86 AA.
                                                                                                                                                                                                                                                                                                                 Claim 17; Column 4; 8pp; English.
                                                                                                             800S-0134489.
800S-0210696.
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                                                                                               82US-0345397
                                                                82US - 0349397
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Best Local Similarity luve.
The B6; Conservative
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                                                                                                                                                              (ELIL ) DILLY & CO ELL.
                                                                                                                                                                                                                               WPI: 1984-049032/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human insulin
                                                                                            16-FEB-1982;
27-MAR-1980;
28-NOV-1980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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                                                              16-FEB-1382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-APR-1996
US4430266-A
                                 07-FEB-1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EP704527-A
                                                                                                                                                                                               Frack BH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR84061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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Drecursor can be a component of chimeric proteins which additionally contains an viernihizal fragment of human growth hormone (hdis) and a cleavable peptide linker (AAVA285). The hdis portion of the chimeric protein acts as an intramclecular chaperone (1MC) for the insular protein acts as an intramclecular chaperone (1MC) for the insular protein acts as an intramclecular chaperone (1MC) for the insular chaperone (1MC) for the insular breathing it to fold correctly. The oldavable peptide linker as a C-terminal Arg residue which enables the hdr pertion of the chimeric protein to be removed after folding has taken place. Production of chaper necessary procedural steps, and hence resulting in a higher yield of wer necessary procedural steps, and hence resulting in a higher yield of the fusion protein and decrease the intermolecular interactions among the fusion proteins, thus allowing folding of the fused insulin precursor at commercially useful high concentrations. The procedural steps of cyandred chape and related cyals and related concentrations and related concentrations steps of cyandred concentrations steps of cyandred not the use of high concentrations of mercaptan or the use of hydrophobic absorbent resins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FVNCHLOGSHIVEALYLVCGEKSFPYTPKTRREADHQVQQVELGGDFGANSDLFLADE 1 - 111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Saps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 463; DB 20;
Pred, No. 8.4e 43;
: Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human proinsulin protein sequence SEQ 1D NO:2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 86: Copserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86 AA:
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WPI: 2000-465955/40.

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The present invention describes an insulin-like growth factor (IGF)-1

24, 25, 43, 49 or 53, optionally in combination with an amino acid at

24, 25, 43, 49 or 53, optionally in combination with an amino acid at

position 12 and/or 16 of the native human IGF-1 sequence, is replaced

with an alanine, glycine, or a serine residue. The residue at position 7

may be rep-aced by any amino acid. (I) can have anidabatic, cardiant,

neuroprotective, anometric, tranquilliser, vubnerary, anometric,

nephrotropic, dermatological, antiHIV and antiviral activities. The IGF-1

mutants are used in any methods where IGFs or insulin are used, e.g. in

treating hypergycaemia, obesity-related, neurological, cardiac, renal,

munnological, and anabolic disorders. These disorders include lung

diseases, glomerulorephritis, interstital nephritis. Turner's syndrome,

laron's syndrome, short stature, increased fat mass-to-lean ratios,

nmunnological disorders, peripheral neuropathy, multiple sclerosis,

muscular dysturctions, kidhey disorders, ranma, wounding, lifection,

human immunodeliciency virus (HV), wounds, skin disorders, diabetes,

hart dysfunctions, kidhey disorders, and whole body growth disorders.

They can also be used for increasing serum and tissue levels of

the libratical active IGF or insulin a mammal. The IGF-1 mutants improve the

half-lives of IGF-1 and insulin. The present sequence represents the

native them a proinsulin protein sequence, which is given in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
            Novel insulia-like growth factor (IGF) I mutants that selectively bind to IGF binding protein (IGFBP)-1 or IGFBP-3, used to improve the half-lives of IGF-I and insulia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FVNCHLOGSHLVEALYLVCGFRGFFYTPKTRREAELLQVGQVELGGGPGAGSLGPLALFG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 FVNQHLOGSHLVBALYLVGSBRGFFYTPKTRRBAEDLQVGQVELGGGPGAGSTQPLALEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Autirheumatic; antiarthritic; osteopathic; cartilage disorder; insulin-like growth factor; IGF; binding protein; IGFBP; rheumatoid arthritis; osteoarthritis; proinsulin; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :ndels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DR 21;
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O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 463; DR 21;
100.0%; Fred. No. 8.4e-43;
dive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 SICKRGIVEGCOTSICSLYOLENYON 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 SEQREGIVEQCETSICSLYOLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dubaquie Y, Filvaroff EH, Lowman HB;
                                                                                                 Nisclosure; Page 44; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM48218 standard; Protein; 86 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   160.0%; Fit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-NOV-2000; 2000US-248985P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-MAY-2001; 2001WO-US15904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-MAY-2600; 2600US-204490P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      similarity 100.
86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GEIH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human proinsulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W0200187323-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Segmence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAM48216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Sest Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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1 FVNQHLCSSHLVBALYIVGSERGFFYIPKTRRBAEDLJVGQVELGGGPGAGSLQPLALEG
                                                                                                                                                                                                                                                   2 FVNQH.,CGSHLVEALYLVCGERGFFYTPKTRREAEDLØVGQVELSGGPGAGSLQPLALEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plasmid pTh alpha 1 was constructed by inserting a synthesised gene for thymosin alpha 1 (AAN40178) into plasmid pBR322. It is used for the construction of pTrp24. The inventors claim a method for protecting bacteria from phage infection - by transformation with cloning vector cong. segment with restriction and modification activity. Prodn. of plasmid pPR 26 or pPR27 which uses pTrp24; and prodn. of plasmid pPR29 which uses a synthetic gene coding for the (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protecting bacteria from phage injection - by transformation with aloning vector confg. segment with restriction and modification
                                                                                                                                                                                  ..
O
                                                                                                                                 Length 87:
                                                                                                                                                                                  Indels
                                                                                                                                                                                  Ö
                                                                                                                                 100.0%; Score 463; DB 3;
100.0%; Pred. No. 8.5e-43;
ivo 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence of the 32 N-terminal AAs of proinsulin.
                         The sequence comprises human proinsulin. (Cpdated on 25-MAR-2003 to correct PR field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hormone, cloning vector, phage resistant.
                                                                                                                                                                                                                                                                                                            61 SLOKRGIVEOCCISICSLYOLENYCN 86
11111 | 1111 | 11111 | 111111 |
62 SLOKRGIVEOCCISICSLYOLENYCN 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAP40217 standard; Protein; 87 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..31
|abel= B-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32..66
/label= C-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label- A-chain
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(first entry)
                                                                                                                                                                               86; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ELIL ) LILLY & CO ELI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67..87
                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1984-070793/12.
                                                                                         87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAN40179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-SEP-1983;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-SEP-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-SEP-1982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-FEB-1992
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                                                                                             Seguence
                                                                                                                                 Query Match
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    %8888
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                                                                                                                                                                                                                   The present invention relates to a method for reating cartifiate disorders. The method comprises contacting cartiflate with a bridger attriby such as insulin like arowth ractor (16FF) and over the A Bridger attriby preference for 16FF bridging trotten? (16FFP-8) over 16FFF in an 18F in an 18F analog with a Bridger affinity preference for 16FFF over 18FFF and 16FFF displacer peptide that prevents the interaction of 16FFF attributed to human 16FFF enceptor. The method is user, for treating cartillage disorders (CD), including degenerative CD, articular CD such as rheumatoid arthritis and esteoartheitis. The present sequence is human proinsult, which was used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Treating cartilage disorders including cartilage damage by inyeapedegenerative cartilageness disorders, by contacting cartilage with insuliarlike growth factor analog with altered afficing for 70F-Fineing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

100.3% Score 463; DB 23; Length 86;
Best Local Similarity 100.0%; Pred. No. 8.4e-43;
Matches 86; Consorvative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plasmid cloning vehicles - useful for transforming bacterial hosts to produce eukaryotic polypeptide(s).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SLOKRGIVEQCCISICSLYQLENYCN 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLOKRGIVEQCCTSICSLYQLENYCN 86
                                                                                                                                                                           Disclosure: Fig 16: 136pp: English
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81US-6286676.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nakamura K.
                     WP1; 2002-382942/11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human proinsulls
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-JUL-1981;
02-JAN-1982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-DEC-1981;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 - JUL- 1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proinsulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP55942-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence
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                                                                                                                                   proteins
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AAP20035
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interferon and human tissue plasminogen activator. (Updated on 16-AGG-2002 to add missing OS field.) (Updated on 25-MAR-2003 to correct PA field.)
                                                      Query Match
Best Local Similarity 100.0
Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schiner RG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ELIL) LILLY & CO FLI.
                                                                                                                                                                                                                                                                                                                                                    05.
                                                                                                                                                                                                                                                                                    Synthetic proinsulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI: 1985-265030/43.
                                       87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; AAN50082
                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            04 -MAR-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-MAR-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JUL-1984:
31-JAN-1985;
                                                                                                                                                                                                                                            25-MAR: 2003
16-AUG-2002
                                                                                                                                                                                                                                                                                                     Froinsuling
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                                                                                                                                                                                                                                                               1661-ACN-13
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                                                                                                                                                                                                                                                                                                                                                                                                                      EP159123-A.
                                                                                                                                                                                                                          AAP50060;
                                        Sednence
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                                                                 1 FVNOHLOGSHIVEALYLVOGERGFFYTPKTRREAEDLOVGOVELGGGPGAGSLQPMALEG 60
                                                                            The inventors claim a process for preparing selectable and autonomously replicating recombinant DNA expression vectors which comprise 1) a transcriptional and translational activating sequence which is in the reading frame of a nucleotide sequence which ends for a poptide or polypeptide; 2) a translational stop signal; 5) a translational start signal which is in the reading frame of a nucleotide sequence that codes for a functional polypeptide, or polypeptide coding sequence codes for 2-20 Ass, esp. AANDOLZE PSOLYS. The functional polypeptide is esp. growth between, human trsuits.
                                                 Saps
                                                <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New recombinant DNA expression vector \cdot with autonomous replication and on transcription generating polycistronic mrna
                           Length 87;
                                                 Indels
                                                                                                                                                                                                                                                                        Selectable vector; autocombusly replicating sector;
                           100.0%; Score 463; EB 5; 100.0%; Pred. No. 8.5e-43; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                     Sequence of the 32 N-terminal AAs of profession.
                                                                                                         SLOKRGIVEGCCTSICSLYQLENYCN 86
                                                                                                                   SLOKEGIVEQCOTSICSLYQLENYCN 87
                                                                                                                                                                                                                                                                                                                                Location/Onalitiers
                                                                                                                                                                          AAP50127 Standard: Protein; 67 AA
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                                                                                                                                                                                                                                                                                                                                                    Pabel - A chain
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/label- B chain
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/label= A chain
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85CN-0101555.
                                                                                                                                                                                                                                    (first entry)
                                                86; Conservative
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                                                                                                                                                                                                                (updated)
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                                                                                                                                                                                                                          (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1985-224921/37.
                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                  expression vector
          B7 AA;
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                                                                                                                                                                                                                                                                                                      Homo sapiens.
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30-SEP-1991
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                                                                                                                                                                                                                                                                                                              Synthetic
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                                                                                                         51
          Sequence
                                                                                                                                                                                                                                                                                                                                 Key
Region
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                                                 Matches
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AAP50127
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                                                                                                                                  2 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLOVGQVELGGGP3AGSLQPLALEG
                                                                                                       1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGPGAGSLQPLALEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful in producing proteinaceous granules in cell transformants, esp
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The synthetic proinsulin gene is expressed in a new selectable and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New selectable and autonomously replicating DNA expression vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               autonomously replicating recombinant DNA expression vector comprising a runaway replicon and a transcriptional and translational activating sequence in the reading frame of the proinsulin coding sequence, the sequence contg a translational stop signal. Host collection of the vector, which is esp. plasmid pC2103, are cuitured, and proinsulin is produced as a highly homogeneous species of proteinaceous granuie. The granule can be
                                                      0;
  Length 87;
                                                      Indels
                                                      .
O
; Score 463; DB 6;
; Pred. No. 8.5e-43;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vector; proteinaceous granule;
                                                                                                                                                                                                              SLUKRGIVEQCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                      62 SLUKRGIVEOCCTSICSLYOLENYCN 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schoner BE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig. 14; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                              AAP50060 standard: protein; 87 AA
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/label-C chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label=B chain.
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  100.0%;
100.0%;
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85US-0697090.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (updated)
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Tue

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61 SLOKRGIVEGCTSICSLYQLENYCN 86
                                                                                           SEQUESCOTSICSLYQUENYCN
                                                                                                                                                                                                                AAR32367 standard: Protein; 87
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Andy RJ, Larson EK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1993-076530/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PFIZ ) PFIZER INC. (SCIO-) SCIOS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Similarity
86; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAQ37003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      type II diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUL-1992;
                                                                                                                                                                                                                                                                                                 25-MAH-2003
18-JUN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W09303174-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-JUL-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-FEB-1993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
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                                                                                                                                                                                                                                                          AAR 32567;
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                                                                                                                                                                                                                                                                       1 PVNOHIGGSBLAFALYLVGGENGFPYTPKTRREARDL, VAOVELGGGG TAGSLGLALED (* 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The inventors claim new recombinant plasmids conto. a GNA sequence encoding a polypeptide, which is foreign to E.coll, in reading plass with a DNA SQ, coding for alleast one functional fragment derived from an outer membrane liporotein gene of E.coll. The foreign gene may be for human insulin. The lipoprotein gene may be the promoter, the 5'-JTR, the 3'-CTR or the transcription termination signal provided that it includes at least the promoter.
readily isolated from cell lysates and is stable on washing with urea or detergent seins, at low commus. The graphic contains it least 50% of proinsuits and all isolation operations are simplified.

(Updated on 16 AUG-2002 to add missing 65 field.)

(Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Recombinant plasmid; E.goli expression vector; secretion vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence encoded by the structural gene for Numan proinsuinn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0% Score 453; 05.7; Length 87: 200.0% Pred. No. 8.58-44:
                                                                                                                                                                                         Query Match
Best Local Similarity 100.0%; Prad. No. 8.5e-43;
Matches 86; Conservative 0; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sognences encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exogenous polypeptide and exter membrane protein of E col
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New recombinant plasmid(s) - contq. DNA
                                                                                                                                                                                                                                                                                                                                                                               SLOKKGIVEQCCTSICSLYGLENYON 97
                                                                                                                                                                                                                                                                                                                                                            SLOKRGIVEQUOTSICSLYQLENYON 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP61090 standard; Protein; 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example: Fig 27; 44pp; English.
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810S-0222010.
810S-0286076.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nakamura K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI: 1986-331802/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 86: Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87 AA:
                                                                                                                                                    87 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAN60872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-MAR-1982;
02-JAN-1981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-MAR-1982;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-501-1981;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US4624926-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inouye M.
                                                                                                                                                                                                                                                                                                                                                          6.3
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                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP61090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents human proinsulin and was decoded from the sequences given in AAQ36996-7001. The CDNA fragment coding for proinsulin was inserted into plasmid vector pUC19 and digested with KPLI and HindIII. This resulted in the formation of the vector pPLNS. A trayment encoding amino acids 1-73 of CAT (see AAQ37002) was inserted into pPLNS to give a plasmid which contained DNA sequences which coded for amino acids 1-73 of CAT, an 8 amino acid linker sequence and human proins:iin. This plasmid, pUC-CAT-proinsulin, could be used in the formation of insulin analogues which may be used in the treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FVNOHLGGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGPGAGSLOPLALEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 FVNOHLGGSHIJVEALYLYVCGERGFFYTPKTRREAEDLQVGGVELGGGPGAGSLQPLALEG
                                                          Human: proinsulin; vector; pUC19; pPINS; CAT; pUC-CAT-proinsulin;
insulin analogue; type 1; type 1; diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              selective and peripheral selective human insulin and their corresp. DNA, for treatment of type I and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 463; DB 14; Length, 87; 100.0%; Pred. No. 8.5e-43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               types I and II diabetes. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SLOKETVECCTSICSLYOLENYCN 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure, Fig 2b; 58pp; English.
                                                                                                                                                                                                                                                                                                                                                                          92WO-0S06451.
                                                                                                                                                                                                                                                                                                                                                                                                                                    91US-0741938,
92US-0918953,
Prolesulin protein sequence
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1 FVNOHLGGSHLVEALYLVCGERSFFYTPKTRREAECLOVGSVELGGSPGAGSLØPLALEG GO

Indels

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Mismatches

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Conservative

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22-SEP-1992;
                                                                                                                                                                                                    24-SEP-1991;
                                                                                                                              Home sapiens
                                                                                                                                                                31-MAR-1993.
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21-APR-1992
                                                     25-MAR-2003
19-JUL-1993
                                                                                                                                                EP534705-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                     AAR33855;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR20467;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
         AAR33855
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FVNQHLCGSHLVEALYLYCGERGFFYTPKTRRBAEDLOVGQVELGGGPGAGSLQPLALEG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This modified human insulin precursor comprises an Niterical initiating dipeptide, chosen from Met-Tyr or Met-Ary, which does not define a cathepsis C dipeptide removal stop point. This dipeptide is linked to the natural human hisulis. Section, entural human profissulin connection peptide and natural human insulis. A chain. Dipeptide removal is carefully controlled to obtain the desired prod. Without further degradation occurring, irrespective
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of whether the next dipept.de in the sequence defines a cathebs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0:
                                                                                                                                                                                                                                                                                                                                                                             or Metarg initiating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match 100.0%; Score 463; DB 11; Length 88; Best Local Similarity 100.0%; Pred. No. 8.66-43; Matches 86; Conservative 0; Mismatches 6; Indels 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                /label-N-terminal initiating dipeptide
                                                                                                                                                                                      /label-natural connecting populde of proinsulin
                                                                                                                                                                                                                                                                                                                                         McConcugh JP;
                                                                                                                                                                                  /label-native human insulin B chain
                                                                                                                                                                                                                             /label-native human insulin A-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Updated on 29.JAN-2003 to add missing OS field.) (Updated on 25-MAK-2003 to correct Pa lield.)
                                                                                                                                                                                                                                                                                                                                                                            Human insulin precursor - contg. Met-1yr or Met-a
dispeptide for controlled removal by cathepsin C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mackellar WC,
                                                                                                           Ruman insulin precursor; cathepsin C.
                                                                                                                                               Location/0.alifiers
                 AAR07682 standard: protein; 88 AA
                                                                                        Modified human insulin precursor.
                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, page 3, 8pp, English.
                                                                                                                                                                                                                                                                                   90EP-0304890,
                                                                                                                                                                                                                                                                                                    890S-0349471.
                                                                      (first entry)
                                                     (updated)
(updated)
                                                                                                                                                                                                                                                                                                                                          Purman TC,
                                                                                                                                                                                                                                                                                                                      (BLIL ) LILLY & CO ELT.
                                                                                                                                                                                                                                                                                                                                                          WPI; 1930-343372/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 M:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C stop point.
                                                                                                                              Home sapiens
                                                                                                                                                                                                                                                                                  04-MAY-1990;
                                                                                                                                                                                                                                                                                                    09-MAY-1989;
                                                             09-JAN-2003
13-FEB-1991
                                                   25-MAR-2003
                                                                                                                                                                                                                                                                 14-NOV-1990
                                                                                                                                                                                                                                               EP397420-A.
                                                                                                                                                                                                                                                                                                                                          Becker GW,
                                   AARC7682;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                     Peptide
                                                                                                                                                        Peptide
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RESULT 12
         AAR07682
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents an analogue of native human proinsulin (hpI). The DNA encoding this sequence was used in the construction of the expression vector of the invention. The coding region of the hpI gene was synthesised and was cloned into the expression plasmid pCZRIZ6S (see also AAQ38307). Expression of this gene lead to the inclusion of an extra amino acid (Arg) in the second position from the N-terminal of mature hpI. The extra amino acid provides increased expression levels of the protein and is then cleaved off to avoid undesirable (updated on 25-MAR-200) to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proinsulis; hpI; native; pCZR126S; expression vector; E. coli; human; expression; immunological effect.
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100.0%; Pred. No. 8.6e-43;
ive 0; Mismatches 0;
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AAR33855 standard; Frotein; 88 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fr Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The fusion product is encoded by a synthetic sequence having at its 5'-end a medification of the 3'-end or the naturally occurring alpha-factor secretory leader and processing signal sequence, where three G.u.Aia pairs have been deleted. A plasmid containing the synthetic proinsulin coding sequence was used to transform kex2-nutain; years trans in the presence or absence of the cloned KEX2 quene. Post-translational processing of pro-insulin into peptides only occurred in yeast transformed to KEXZ plus, see also AAZ20545. (Opdated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel DNA for endo:peptidase prodn. - useful for in vivo or in
                                         BCA-5; yeast preferred codons; postitranslational procession; insulin; endopeptidase.
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Yeast alpha-factor signal-human proinsalis fusion product
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6...?
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880S-0183252.
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                                                                                                                                                                     Cleavage-site
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08-APR-1988;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The proinsulin is expressed in Saccharomyces cerevisiae A3103.1. It is encoded by a synthetic gene (see AAN90279). The 3 consecutive peptides are proinsulin chains B, C and A resp. The regions are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Expression and secretion of heterologous proteins in yeast - using truncated a factor leader sequence contg. signal peptide and slycosylation site.
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                                                                                         "dibasic processing site"
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                                            "proinsulin chain B"
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ocation/Qualifiers
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GenCore version 5.1.6
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September 15, 2003, 11:57:40 : Search time 19,7275 Seconds (without alignments) 184,449 Million cell updates/sec Run on:

- protein search, using sw model

OM protein

US-09-423-100-4 463 Title: Perfect score: Sequence:

1 FVNQHEGSHLVEALYLVCS..........TVEQCCTS:CSLYQJENYCN 86 BLOSOM62 Gapop 10.0 . Gapext 0.5 Scoring table:

328717 segs, 42310858 residues Searched: 128717 Total number of Mits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Issued\_Patents\_AA:\* Database :

1: / cgn2\_6/ptodata/1/laa/5A\_DCMB.pcp.\*
2: / cgn2\_6/ptodata/1/laa/5b\_DCMB.pcp.\*
3: / cgn2\_6/ptodata/1/laa/5A\_DCMB.pcp.\*
4: / cgn2\_6/ptodata/1/laa/5B\_CCMB.pcp.\*
5: / cgn2\_6/ptodata/1/laa/PCJUS\_COMB.pcp.\*
6: / cgn2\_6/ptodata/1/laa/PCJUS\_COMB.pcp.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printer, and is derived by analysis of the rotal acore distribution.

## SUMMARIES

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463 105.0 86 4 US-59-477-924-2 Sequence 2, 463 105.0 86 4 US-99-8725-981-2 Sequence 2, 463 105.0 86 4 US-99-878-3-896-2 Sequence 2, 463 100.0 86 4 US-99-878-3-896-2 Sequence 2, 463 100.0 86 4 US-99-878-3-896-2 Sequence 4, 453 100.0 110 3 US-99-886-30.8-4 Sequence 1, 463 100.0 110 3 US-99-886-30.8-2 Sequence 2, 463 100.0 110 3 US-98-988-2 Sequence 2, 463 100.0 110 3 US-98-889-028-2 Sequence 2, 463 100.0 110 4 US-99-886-2 Sequence 2, 463 100.0 110 4 US-99-886-2 Sequence 6, 463 100.0 110 5 PCT-C895-08996-2 Sequence 6, 463 100.0 130 4 US-99-886-980-2 Sequence 6, 463 100.0 130 4 US-99-886-889-8 Sequence 6, 463 100.0 151 2 US-98-988-889-8 Sequence 6, 463 100.0 151 2 US-98-988-889-8 Sequence 6, 463 100.0 151 2 US-98-888-888-888-888-888-888-888-888-888	Resurt No.	Score	Ouery Match	Lengih	e E	n	Description
2         463         100.0         86         4         95-725-981-2         Sequence 2.           3         463         100.0         86         4         15-99-878-380-1         Sequence 2.           4         453         100.0         86         4         15-99-878-380-1         Sequence 2.           4         453         100.0         96         2         105-93-134-886-4         Sequence 1.           4         453         100.0         110         3         105-08-160-3         Sequence 1.           9         463         100.0         110         3         105-08-950-720A-1         Sequence 1.           9         463         100.0         110         3         105-08-950-720A-1         Sequence 1.           1         463         100.0         110         3         105-08-950-720A-1         Sequence 2.           1         463         100.0         110         3         105-08-186-22         Sequence 2.           4         463         100.0         110         3         105-08-186-27         Sequence 2.           4         463         100.0         110         4         105-08-186-27         Sequence 2.           4	-	463	100.0	86	-,	- 19-47	Sequence 2. April
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5         463         100.0         96         2         US-09-134-864-4         Sequence 1.           6         160.0         97         1         US-09-366-308-4         Sequence 1.           6         160.0         10         3         US-08-160-2         Sequence 1.           9         463         100.0         110         3         US-08-59-028-2         Sequence 1.           9         463         100.0         110         3         US-08-785-2         Sequence 2.           1         463         100.0         110         3         US-08-785-2         Sequence 2.           4         463         100.0         110         4         US-08-186-2         Sequence 2.           4         463         100.0         110         4         US-08-186-2         Sequence 2.           4         463         100.0         110         4         US-08-186-2         Sequence 6.           4         463         100.0         130         4         US-08-186-15         Sequence 6.           4         463         100.0         130         4         US-08-186-15         Sequence 6.           4         463         100.0         130	₹#	463	130.0		-1	-09-87	- 1
66         463         160.0         96         4         US-09-386-301A-4         Sequence 4.           7         463         160.0         13         3.5-68-95-720A-4         Sequence 4.           9         463         160.0         110.3         3.5-68-95-22         Sequence 7.           1         463         160.0         110.3         3.5-68-582-2         Sequence 7.           1         463         160.0         110.3         3.5-68-782-2         Sequence 7.           2         463         160.0         110.3         3.5-68-782-2         Sequence 7.           3         463         160.0         110.4         4.7-72-701-2         Sequence 2.           4         463         160.0         110.4         4.7-69-702-2         Sequence 2.           4         463         160.0         117.4         4.7-703-2         Sequence 6.           4         463         160.0         117.4         4.7-703-2         Sequence 6.           4         463         160.0         117.4         4.7-703-2         Sequence 6.           4         463         160.0         117.4         4.7-70-6         Sequence 6.           4         463         160.0<	S	463	100.6		7	-09-13	<del>.</del>
7 463 100.0 97 1 03-08-160-376A-4 Sequence 4, 463 100.0 110 3 03-08-250-720A-11 Sequence 12, 463 100.0 110 3 05-08-764-582-2 Sequence 2, 463 100.0 110 3 05-08-764-582-2 Sequence 2, 463 100.0 110 3 05-08-764-582-2 Sequence 2, 463 100.0 110 4 05-08-762-2 Sequence 2, 463 100.0 110 5 PCT-C995-08-96-2 Sequence 6, 463 100.0 110 5 PCT-C995-08-96-2 Sequence 6, 463 100.0 110 5 PCT-C995-08-96-2 Sequence 6, 463 100.0 110 4 05-08-508-64-15 Sequence 6, 463 100.0 130 4 05-08-508-64-15 Sequence 6, 463 100.0 130 105-08-508-64-15 Sequence 15, 463 100.0 167 1 05-08-508-64-15 Sequence 15, 463 100.0 167 1 05-08-508-64-15 Sequence 15, 463 100.0 167 1 05-08-508-64-15 Sequence 15, 463 100.0 167 1 05-08-08-508-64-15 Sequence 15, 463 100.0 167 1 05-08-08-13-8 Sequence 15, 45-08-7 96-4 05-08-368-363A-5 Sequence 15, 45-08-59-39-30-6-5-3-3-4 Sequence 15, 444-95-9 97 3 05-09-99-307-6 Sequence 15, 444-95-7 110 3 05-08-59-07-6 Sequence 15, 443-95-7 110 3 05-08-59-07-6 Sequence 15, 443-95-7 110 3 05-08-59-07-6	ç	463	100.0		4	-09	-
8         463         100.0         110         3         15-08-95-720A-11         sequence 11           9         463         100.0         110         3         25-68-589-028-2         sequence 2           1         463         100.0         110         3         95-08-785-22         sequence 2           2         463         100.0         110         4         95-08-785-22         sequence 2           4         63         100.0         110         4         95-08-959-2         sequence 2           4         63         100.0         110         5         PCT-C895-08596-2         sequence 2           4         63         100.0         117         4         35-09-280-306-3         sequence 6           4         63         100.0         130         4         35-09-280-306-3         sequence 6           4         63         100.0         130         4         35-09-280-306-3         sequence 6           4         63         100.0         130         4         35-08-64-15         sequence 6           4         63         100.0         167         105-08-64-15         sequence 7           4         63         100.0	۲۰-	463	100.0	97	~	-08	÷
9         463         100.0         110         3         CS-GH-589-028-2         Sequence 2.           1         463         100.0         120         3         US-08-785-2         Sequence 2.           2         463         100.0         110         4         US-08-485-527-2         Sequence 2.           3         463         100.0         110         4         US-08-185-827-2         Sequence 2.           4         463         100.0         110         4         US-09-185-827-2         Sequence 2.           5         463         100.0         117         4         US-09-189-927-2         Sequence 2.           6         463         100.0         117         4         US-09-280-05         Sequence 6.           7         463         100.0         130         4         Sequence 15.           8         463         100.0         161         2         US-08-64-15         Sequence 15.           9         463         100.0         167         1         US-08-64-15         Sequence 7.           10         463         100.0         167         1         US-08-64-15         Sequence 8.           457         98.7         1 <td>æ</td> <td>463</td> <td>100.0</td> <td>110</td> <td>~,</td> <td>-956-</td> <td>: **</td>	æ	463	100.0	110	~,	-956-	: **
0         463         100.0         110         3         US-08-784-582-2         Sequence 2.           1         463         100.0         110         4         US-08-475-1-2         Sequence 2.           2         463         100.0         110         4         US-09-185-852-2         Sequence 2.           4         463         100.0         110         4         US-09-185-852-2         Sequence 2.           4         463         100.0         110         5         PCT-0895-08946-2         Sequence 2.           5         463         100.0         117         4         US-08-08946-2         Sequence 6.           6         463         100.0         117         4         US-08-08946-2         Sequence 6.           7         463         100.0         151         2         US-08-086-089-08         Sequence 6.           9         463         100.0         167         1         US-08-508-64-15         Sequence 6.           9         463         100.0         167         1         US-08-664-15         Sequence 7.           9         463         100.0         167         1         US-08-568-64-15         Sequence 7.           457 <td>6</td> <td>463</td> <td>100.0</td> <td>011</td> <td>~</td> <td>08-08-589-028-2</td> <td>~</td>	6	463	100.0	011	~	08-08-589-028-2	~
1         463         100.0         110         3         9S-08-785-271-2         Sequence 2.           2         463         100.0         110         4         9S-08-472-701-2         Sequence 2.           4         63         100.0         110         5         PCT-US95-08596-2         Sequence 2.           4         63         100.0         117         4         3S-09-280-300-63         Sequence 2.           5         463         100.0         117         4         3S-09-280-508-508-508-508-508-508-508-508-508-5	10	463	100.0	077	~	US-08-784-582-2	લ્ય
2         463 100.0         110 4 15-08-472-701-2         Sequence 2.           3         463 100.0         110 4 05-08-188-682-2         Sequence 2.           4         463 100.0         110 4 05-028-08946-2         Sequence 5.           5         463 100.0         117 4 05-028-08946-2         Sequence 6.           6         463 100.0         130 4 05-08-080-62         Sequence 6.           7         463 100.0         151 2 05-08-080-64-15         Sequence 15-08-080-064-15           8         463 100.0         161 2 05-08-508-64-15         Sequence 15-08-080-064-15           9         463 100.0         167 1 05-07-918-933-8         Sequence 7-08-08-08-08-08-08-08-08-08-08-08-08-08-	11	463	100.0	110			ci
3         463         100.0         110         4         US-09-188-852-2         Sequence 2.           4         453         100.0         110         5         PCT-US95-08596-2         Sequence 2.           4         63         100.0         130         4         US-09-280-08596-2         Sequence 6.2           7         463         100.0         130         4         US-09-280-064-15         Sequence 6.2           8         463         100.0         161         2         US-08-508-664-15         Sequence 15.5           9         463         100.0         167         1         US-08-664-15         Sequence 16.5           1         453         100.0         167         1         US-09-134-86-5         Sequence 8.           1         457         98.7         96         2         US-09-134-86-5         Sequence 8.           3         457         98.7         97         1         US-08-369-487-7         Sequence 9.           4         98.5         90         1         US-08-369-487-7         Sequence 9.           5         444         95.7         3         US-09-099-307-6         Sequence 6.           4         4         95.7<	12	463	100.0	110	↔	US-08-472-701-2	2
4 63         100.0         110         5         PCT-C995-08996-2         Sequence 2           6 463         100.0         117         4         35-09-280-370-63         Sequence 65,2           6 463         100.0         130         4         35-09-280-370-63         Sequence 65,2           7 463         100.0         151         2         105-08-508-664-15         Sequence 15,5           8 463         100.0         161         2         105-08-508-664-15         Sequence 15,5           9 463         100.0         167         1         105-08-664-15         Sequence 8,5           1 457         98.7         96         2         105-09-134-86-5         Sequence 8,5           1 457         98.7         96         2         105-09-134-86-5         Sequence 5,5           3 457         98.7         97         1         105-09-386-363A-5         Sequence 7,5           4 456         98.5         90         1         105-09-386-363A-5         Sequence 7,5           5 46         98.5         90         1         105-09-386-363A-5         Sequence 7,5           6 444         95.7         97         3         105-09-396-307-6         Sequence 8,5           4 43 <td>13</td> <td>463</td> <td>100.0</td> <td>110</td> <td>4</td> <td>US-09-185-852-2</td> <td>7</td>	13	463	100.0	110	4	US-09-185-852-2	7
5         463         100.0         117         4         35-09-280-030-63         Sequence 65.4           7         463         100.0         130         45-280-030-62         Sequence 62.4           8         463         100.0         161         2         864-15         Sequence 15.4           8         463         100.0         167         1         105-08-64-15         Sequence 15.4           9         463         100.0         167         1         105-09-18-953-8         Sequence 15.4           1         453         98.7         96         2         05-134-845-5         Sequence 5.4           2         457         98.7         96         2         05-134-846-5         Sequence 5.4           3         457         98.7         96-1         105-08-364-36         Sequence 5.5           4         466         98.5         90         1         05-08-36-487-7         Sequence 6.5           4         456         98.5         90         1         05-08-36-37.5         Sequence 6.5           5         44         95.7         1         05-09-99-30.5         Sequence 6.5           6         444         95.7         1         <	14	463	100.0	110	S	PCT-US95-08596-2	2, A
6         463         100.0         130         4         US-69-28C-630-62         Sequence 62.           7         463         100.0         151         2         08-508-644-15         Sequence 15.           9         463         100.0         167         1         08-79-18-953-8         Sequence 15.           9         463         100.0         167         1         08-09-184-915         Sequence 15.           1         457         98.7         96         2         08-08-186-58         Sequence 5.           2         457         98.7         97         1         08-09-184-916         Sequence 7.           3         457         98.7         97         1         08-09-184-916         Sequence 7.           4         456         98.5         90         1         08-08-989-487-7         Sequence 7.           5         44         95.5         97         3         08-09-389-487-7         Sequence 6.           6         444         95.7         110         3         08-09-99-307-6         Sequence 6.           7         443         95.7         110         3         08-09-099-307-6         Sequence 6.           7         4	15	463	100.0	117	₹	JS-C9-280-C30-63	9.3
7         463         100.0         151         2         05-65-64-15         Sequence 15, sequence 15, sequence 15, sequence 15, sequence 16, sequence 16, sequence 16, sequence 16, sequence 17, sequen	16	463	100.0	130	₹	38-080-28C	62.
8         463         100.0         161         2         US-08-568-664-15         Sequence 16-8           463         100.0         167         1         US-07-918-953-8         Sequence 8.           1         453         100.0         167         1         US-08-681-661-8         Sequence 8.           2         457         98.7         96         2         US-09-134-816-5         Sequence 7.           3         457         98.7         96         4         US-08-386-303A-5         Sequence 5.           4         456         98.5         90         1         US-08-364-487-7         Sequence 6.           5         446         96.3         97         3         US-09-099-307-5         Sequence 6.           6         444         95.7         110         3         US-09-099-307-6         Sequence 8.           7         43         95.7         110         3         US-08-099-307-6         Sequence 8.	17	463	100.0		7		Š
9         463         100.0         167         1         US-07-918-953-8         Sequence 8,           0         463         100.0         167         1         US-08-08-18-65.8         Sequence 7,           2         457         98.7         96         4         US-09-386-303A-5         Sequence 5,           3         457         98.7         97         1         US-08-369-487-7         Sequence 7,           4         456         98.5         90         1         US-08-369-487-7         Sequence 7,           5         446         96.3         97         3         US-09-099-307-6         Sequence 6,           6         444         95.7         3         US-09-099-307-6         Sequence 6,           7         443         95.7         110         3         US-08-569-026-4         Sequence 6,	oc ri	463	100.0		7	-08-508-654-1	9.
0         463         100.0         167         1         US-09-134-816-5         Sequence 8.           1         457         98.7         96         4         US-09-134-816-5         Sequence 5.           2         457         98.7         4         4         Sequence 5.           3         457         98.7         97         1         US-08-369-487-7         Sequence 5.           4         456         98.5         90         1         US-08-036-731A-43         Sequence 43.           5         446         96.3         97         3         US-09-099-307-6         Sequence 6.           6         444         95.7         110         3         US-08-569-028-4         Sequence 8.           7         443         95.7         110         3         US-08-569-028-4         Sequence 8.	19	463	100.0		-	US-07-918-953-8	8,
1         457         98.7         96         2         US-09-134-886-5         Sequence 5.           3         457         98.7         96         4         US-09-386-303A-5         Sequence 5.           3         457         97         1         US-08-386-3437-5         Sequence 45.           4         456         98.5         90         1         US-08-030-731A-43         Sequence 6.           5         446         96.3         97         3         US-09-099-307-6         Sequence 6.           6         444         95.7         110         3         US-08-569-307-6         Sequence 8.           7         443         95.7         110         3         US-08-569-028-4         Sequence 8.	20	463	100.0		-	US-08-081-561-8	∞ œ
2     457     98.7     96.4     US-09-386-303A-5     Sequence 5.       3     457     98.7     1     US-08-369-487-7     Sequence 7.       4     456     98.5     90     1     US-08-030-731A-43     Sequence 43.       5     446     96.3     97     3     US-099-307-6     Sequence 6.       6     444     95.9     3     US-099-307-6     Sequence 6.       7     443     95.7     110     3     US-08-589-026-4     Sequence 8.	21	457	98.7	95	(7	US-09-134-836-5	۲,
3     457     98.7     97     1     US-08-369-487-7     Sequence 47.       4     456     98.5     90     1     US-08-03-738-43     Sequence 43.       5     446     96.3     97     3     US-09-937.5     Sequence 6.       6     444     95.9     3     US-09-999-307.6     Sequence 6.       7     443     95.7     110     3     US-08-569-026-4     Sequence 4.	22	457	98.7	96	-3	US-09-386-303A-5	5,
4         456         98.5         90         1         US-08         036-731A-43         Sequence 43.           5         446         96.3         97         3         US-09-099-307.6         Sequence 6.           6         444         97         3         US-09-099-307.6         Sequence 8.           7         443         95.7         110         3         US-08-569.02#-4         Sequence 8.	23		98.7	46	~	-08	١~-
5 446 96.3 97 3 US-09-099-307-6 Sequence 6, 6, 444 95.9 97 3 US-09-099-307-8 Sequence R. 7 443 95.7 110 3 US-08-589-028-4 Sequence 4,	24		98.5	06	-	-08	(#) ***
6 444 95.9 97 3 US-09-099-307-8 Sequence R. 7 443 95.7 110 3 US-08-589:028-4 Sequence 4.	25		66.3	97	~	- 60-	Ġ
3 95.7 110 3 US-08-589-028-4 Sequence 4.	58		6.55	97	~	-660-60-	æ.
	27	443	95.7		~	-08-583-02	₹,**

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Ω.7	7)	70.6	.)	n	02-06-784-382-4	sednence 4. Wibit
2.5	6443	95.7	110	ς٠,	US-08-785-27:-4	Sequence 4, Appli
30	440	95.0	25	'n	US-09-095-307-7	
: 1 ~	435	94.0	65	'n	US-09-099-307-11	Sequence 11, Appl
35	398	86.0	16	7	US-09-676-787-7	
.55	292.5	63.2	67	4	US-08-531-988A-1	٦,
3.4	290.5	62.7	83	7	US-08-981-988A-3	Sequence 3, Appli
35	288.5	62.3	83	7	US-08-981-988A-6	9
36	288.5	62.3	113	4	US-09-484-848-16	16,
37	286.5	61.9	67	4	US-08-981-988A-2	~
38	285.5	61.7	83	4	US-08-981-988A-8	Sequence 8, Appli
39	284.5	61.4	29	-7	US-06-981-968A-5	'n
40	281.5	60.8	57	4	US-08-981-988A-7	7,
41	281	60.7	96	4	US-09-201-2278-43	43,
4 2	280	60.5	112	4	US-09-484-848-15	15,
(f)	279.5	60.4	83	4	US-06-981-968A-9	6
4.4	278.5	60.2	69	4	US-08-981-988A-4	₹
45	272.5	58.9	53		US-08-233-617-4	Sequence 4, Appli
					ALIGNMENTS	
RESULT 1	_					
18-00-47	US-09-477-924-2					
: Sequer	Sequence 2. Application US/09477924	pplicat:	/Sn ::0:	500	77924	
. Pa.e.t	Patent No. 6403764	03764				
: GENER/	GENERAL INFORMATION:	MATION:				
: APPLI	APPLICANT: Dubaquie, Yves	ubaquie.	, Yves			
: APPL	H	Owner, )	Henry			
C	ľ			•	C 8.4 4 1 C 8.4	

Obery Match 100.0%; Score 463; DB 4; Length 86; sest Local Similarity 100.0%; Pred. No. 1.5e-47; Matches 66; Conservative 0; Mismatches 0: Indels TITLE OF INVENTION: PROTEIN VARIANTS FILE REFERENCE: P172R1-1 CURRENT APPLICATION NUMBER: US/09/477,924 CURRENT FILING DATE: 2005-01-05 NUMBER OF SEQ ID NOS: 6 DEGANISM: Homo sapiens US-09-477-924-2 SEQ ID NO 2 LENGTH: 86 FRT.

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Gaps .; O

1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGFGAGSLQPLALEG 50 : FVNQHLCGSHLVEALYLYCGSRGFFYTPKTRREADHJOVGOVELGGGFGAGSLQPLALEG 60 RENULL 2
US-09-73-981-2
Sequence 2. Application US/09723981
TILLEOWNANTION: Herry
TILLE OF INVENTION: PRCTEIN VARIANTS
FILE REFERENCE: PALICATION NUMBER: US/09/723,981
CCRRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/477,923
PRIOR FILING DATE: 2000-01-05
SEQ ID NO 2
LENGTH: 86
LENGTH: 86 61 SEQKRGIVEQCCTSICSLYQLENYCN 86 61 SLOKRGIVEGCCTSICSLYOLENYCN 86 TYPE: PRT OKGANISM: Homo sapiens US-09-723-981-2 3 ŝ 2 5

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RESULT 6
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Patent No. 6534281
GENERAL INFORMATION
APPLICANT: FUSITION SACERO
APPLICANT: KITALIMA, SacERO
APPLICANT: KITALIMA, SacERO
APPLICANT: NAKATSURE, Kacru
APPLICANT: NAKATSURE, Racru
APPLICANT: NISHIZONO, Isac
ITILE OF INVENTION: Immandassay For Neasuring Busan C-Peptide and Kat Tachefor CORRENT APPLICATION NUMBER: US/09/878, 880
CURRENT APPLICATION NUMBER: US/09/878, 880
CURRENT APPLICATION NUMBER: US/09/878, 880
                                                                              1 FVNQHLGGSHLVEALYT VGGERGFFYTT KTRRKALDLGVQQVELGGGGRAGSLGGT ALIGE NO
                                                                                                     1 FVNGHLCGSHLVEALYLVGGERGFFYTPKTRREAEDLQVGQVELGGGRGAGSLQPLALEG 60
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1. Similarity 100.04: Fred. No. 1.5e-47;
86: Conservative 6; Mismatches 6: Indeix
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Pred, No. 1.5e-47;
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100.0%; Pred. No. 1:5e-47;
ive 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Industrie, Yves
APPLICANT: Industrie, Yves
TITLE OF INVENTION PROTEIN VARIANTS
FILE REPERENCE: P1712R,
CURRENT APPLICATION NUMBER: US/C9/723,896
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US/C9/477-923
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILLING DATE: 2061-06-12
PRIOR APPLICATION NUMBER: JP 2000-174691
PRIOR FILLING DATE: 2000-96-12
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin version 3.
                                                                                                                                                         61 SLOKKGIVEQCOTSTOSLYJLENYON 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 SLOKRGIVEOCCISIOSLYQLENYON 86
                                                                                                                                                                                                                                                                                            // Sequence 2, Application US/09721896
// Patent No. 6509443
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Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-09-878-383-1
                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                      ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                           RESULT 3
US-09-723-896-2
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US-C9-878-380-1
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LENGTH: 85
    Query Match
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                                         Matches
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APPITCANT: Rubroder, Franz-Josef
AFFLCANT: Keller, Reinhold
TITLE DF INVENTION: improved process for obtaining
TITLE DF INVENTION: insulin precursors having correctly bonded cystine bridge
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
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                                                          1 FVWQHLCGSHLVEALYLVGGRRGFFYTPKTRREAEDLQVGQVELGGGPGASSLQPLALEG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGGPGAGSLQPLALEG 60
 Gaps
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0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Finnegan, Henderson, Farrabow, Garrett & ADDRESSEE: Dunner
STREET: JUNG 7 Street, N.W.
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCFTWARE: Patentin Release #1.0, Version #1.30
CURRENI APPLICATION DATA:
FILLING DATE: US/09/134,836
FILLING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTCRNEY/AGENT INFORMATION:
NAME: Lesite McDonell
REGISTRAILON NUMBER: 34,872
REFERENCE/DOCKET NUMBER: 02481.1600-00000
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
 Mismatches
                                                                                                        SICKEGIVECCTSICSLYQLENYCN 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 SLOKKGIVEGCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
CCMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                      Sequence 4, Application US/03134836
Patent No. 5986048
GENERAL INFORMATION:
 .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: (202) 408-406
TELEFAX: (202) 408-4406
INFORMATION FOR SEQ 1D NO: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86; Conservative
86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
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1..96
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20005-3335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                     AUDRESSEE: Du
STREET: 1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ) NAME/KEY:
) LOCATION:
0S-09-134-836-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COPOLOGY:
                                                                                                                                                                                                                       78-09-134-836-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: I
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Best Local 9
 Materies
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1 PVNCHLOSSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGPGAGSLQPLALEG 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Overy Match 100.0%; Score 463; DB is Length 97; Rest Local Similarity 100.0%; Pred, No. 1.8e-47; Matches 86; Conservative 0; Mismatches 0; Indels
  Process For Obtaining Proinsulin
                                                                                                                                                                                                   ZIP: 08876-1258
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
COMPUTER: IBM 386
                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Kenneth A. Genom!, Esq.
STREET: R. 202-206 No. 5473049th/P.O. Box 2500
CITY: Somerville
                       Possessing Correctly Linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Barbara V. Maurer, Esq.
REGISTATION NUMBER: 31,287
REFERENCE/DOCKET NUMBER: HOE 92/F 384
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: CORKIIN, Darrell C.
APPLICANT: Lotton-Day, Catherine E.
APPLICANT: Lok. Si
APPLICANT: Jaspers, Stephen R.
ITILE OF INVENTION: INSULIN HOMOLOG
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 SEQNRGIVEQUESICSEPQEENYCH 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 SLOKRGIVEDCCTSTCSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                           SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DAIA:
APPLICATION NUMBER: US/08/160,376A
FILING DATE: December 1, 1993
CLASSIFICATION: 330
                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: GE P 4240420.7
FILING DATE: December 2, 1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue Bast
                                           Cystine Bridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HS-08-950-726A-11
Sequence 11, Application US/08950720A
Fatent No. 6046028
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IELEPHONE: (908) 231-4079
TELEFAX: (908) 231-2255
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACIERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OFERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Win
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JENGIH: 97 Amino Acids
TYPE: Amino Acid (AA)
TITLE OF INVENTION: F
TITLE OF INVENTION: F
TITLE OF INVENTION: C
NUMBER OF SEQUENCES:
                                                                                                                                                                    E: New Jersey
IRY: U.S.A.
08876-1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDA...
STREET: 120-
TTV: Seattle
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-160-376A-4
                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                STATE:
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    US-09-380-3038-4
Sequence 4, Application US/09:86303A
February No. 6380355
GENERAL INFORMATION:
APPLICANT: Rubroder, Franz-Josef
APPLICANT: Rubroder, Franz-Josef
TILE OF INVENTION: Ingroved process for obtaining
TILE OF INVENTION: Ingroved process having sorrectly bacacod eystine tridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FUNCHLOGSHLUBALYLVOGERGFFYTPKTEREAEDLQVGQVELGGGPGAGSTQPLATEG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 FVNQHLGGSBLAVFALYLV/GENGFFYTPKTRRFAEDLQVGQVELGGGGGGAGGLGALEG 30
                                                                                                                                                              NUMBER DE SEOUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, Henderson, Farrahow, Garrett &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sength 96;
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                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Lessine McDonsel.
REGISCHATION NIMBER: 34,872
REFENSIVE/COCKET NUMBER: 02481.1600-00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KSY: Protein
LOMATION: 1.196
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 SLOKAGIVEQCCTSICSLYQLENYCN 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (202) 408-4506
TELEPAK: (202) 408-4400
INFORMATION FOR SEO ID NG: 4:
SEGGENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                  Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRGANISM: Escherichia poli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECCHMONICATION INFORMATION:
TELEPHONE: (202) 408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/08150376A
Patent No. 5473049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 96 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Obermeier, Ranier
Gerl, Martin
Ludwig, Jurgen
Sabel, Walter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: Linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                 Dunner
                                                                                                                                                                                                                                                             CITY: Washington
SIATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                STREET: 1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 86: Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Oberme
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APPLICANT:
APPLICANT:
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US-08-160-376A-4
  US-09-386-303A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE
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T. FVNQHLGGSHLVEALVINGSERGFFYTPKTRREAFDLOVGQVELGGGPGAGSLQPLALEG 60
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APPLICANT: Thigpen, Anice E.
APPLICANT: Wadde, Christian
APPLICANT: Kruse, Fred
APPLICANT: WGarry, Dennis
TITLE OF INVENTION: SECRETORY CELL LINES
NUMBER OF SEQUENCES: 79
                                                                                                                                                                                                                                   Length 110;
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OFERALING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Pelease #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                     Chery Match 190.0%: Score 463; OB 3;
Rost Local Similarity 100.0%: Pred. No. 2.1e-47;
Matches 86; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/06/784,582
FILING DATE: CONGUSTONLY HEREWITH
CLASSIFICATION DATA:
APPLICATION NUMBER: US 66/028,427
FILING DATE: IS-0CT-1996
FRICH APPLICATION DATA:
APPLICATION NUMBER: US 68/589,028
APPLICATION NUMBER: US 08/589,028
                                                                                                                                                                                                                                                                                                                                                                                                                          Halban, Fhilippe A.
No. 6110797mington, Karl D.
Clark, Samuel A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Arnold, White & Durkee P.C. Box 4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 37,642
REFERENCE/DOCKET NUMBER: UTSD:514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Newgard, Christopher B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Segmence 2, Application US/08784582
Fatent No. 6110767
GENERAL INFORMATION:
  TELEFAN: (512) 418-3000
TELEFAX: (512) 474-7577
INFORMATION FOR SEQ 1D NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 110 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Highlander, Steven L. REGISTRATION NUMBER: 37,642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECCMMUNICATION INFORMATION:
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INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : 110 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS: ADDRESSE: Arnold, W
                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: P.C. C. CITY: HOUSTON
                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 77210
                                                                                                                                                                     COPOLOGY:
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TYPE: am
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APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    r3-08-784-592-2
                                                                                                                                                                                         ES-08-589-028-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                <u>:</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25 FVNQHLCGSHLVEALYLVGERGFFYTPKTRRAFCLQVGTVELGGSPGAGSIQPLALEG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FVNQHLGGSHLVEALYLVGGERGFFYTPKTTREABULÖVGQVFLGGGPGAGSLQPLALEG +0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: NewGard, Christopher B.
APPLICANT: Haiban, Philippe
APPLICANT: Haiban, Philippe
APPLICANT: No. 6687129minqton, Karl D.
APPLICANT: Clark, Samiel A.
APPLICANT: Thigpen, Anice E.
APPLICANT: Thigpen, Anice E.
APPLICANT: Trippen, Anice E.
TITLE OF INVENTION: Recombinant Expression of Proteins From TITLE OF INVENTION: Socretory Cell Lines
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%; Score 46%; DB x; LANGLD 11%; Best Local Similarity 100.0%; Pred. No. 2.16-47; Matches 86; Conservative 0; Mismatches 9; Indels x
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 18M PC COMPATIL:
COMPATING SYSTEM:
SOFTWARE: PATENTIN Release #1.0, Version #1.36
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATICN:
NAME: Highlander, Steven :
REGISTRATION NUMBER: 47,642
REFERENCE/DOCKET NUMBER: UTSD:425\HYL.
TELECOMMUNICATION INFORMATICN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 SLOKRGIVEOCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/589,028
FILING DATE: CONCULTENTLY HEREWITH
                      APPLICATION NUMBER: US/03/950,720A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Arnoid, White & Durkee
STREET: P. O. Box 4433
CITY: Houston
                                                                                                                                                                                                                                        60.96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-589-028-2
; Sequence 2, Application US/085; 9628
; Patent No. 6087129
                                                                                                                                                                                    NAME: Sawislak, Deborah A
REGISTRAIION NUMBER: 37,438
REFRENGAINGKET NYMBER: 96:0
TELECHMUNICATION INFORMATION:
TELEPHONE: 206:442.6672
TELEFAN: 206:442-6678
                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEO II NO: 11:
SEQUENCE CHRANTERISTICS:
LENGTH: 110 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: No. 66460280
                                                                                                                                          FILING DATE: ATTORNEY/AGENT INFORMATION:
CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-950-720A-11
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1 FVNQHLGGSELVEALYLVCGERGFFYTPKTRREAEDLQVGQVELGGGPGAGSLQPLALEG 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: OSborne, William R.A.
APPLICANT: Ramesh, Nagarajan
TITLE OF INVENTION: Compositions and Methods for Treating Diabetes
FILE REFERENCE: P-UW 3254
CURRENT APFLICATION NUMBER: US/09/185,852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 463; DB 4; Length 110; 100.0%; Pred. No. 2.1e-47; ive 0; Mismatches 0; Indeis 0
                                                                                                                                                                                                                                        and Treatment Methods for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85 SLOKRGIVEQCOTSICSLYQLENYCN 110
                    61 SLQKRGIVEDCCTSICSLYQLENYCN 86
51 SLQKRGIVEQCCISICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMFUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCHI Text
CORRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/472,701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Deconti, Giulto A., Jr.
REGISTRAILON NUMBER: 31.503
REPERENCE/DOCKET NIMBER: DCI-092DV
FELECOMMUNICATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                    E: LAHIVE & COCKFIELD 60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION: 435
PRICK APPLICATION DATA:
APPLICATION NUMBER: US 08/272,223
FILING DATE: 08-73LY-1994
CLASSIFICATION: 435
                                                                                                                                                                                            APPLICANT: Griffin, An: C.
APPLICANT: H16key, William F.
IIILE OF INVENTION: Detection and Tr
IITLE OF INVENTION: Type I Diabetes
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09185852
Patent No. 6537806
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CS-66-472-761-2
Sequence 2, Application US/08472701
Patent No. 6509165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (617)227-7400
TELEPAX: (617)227-5941
INFORMATION FOR SEQ 1D NO. 2
SEQUENCE CHARACIBELSTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: amino acids TypeLoGY: 1:0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
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Matches 86; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein 08-68-472-701-2
                                                                                                                                                                                                                                                                                                                                                                                 Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                    02109-1875
                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                        USA
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                                                                                                                                                                                                                                                                                                                                                              CITY: BOS
STATE: MA
COUNTRY:
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                                                                                                                                                             25 FVNQHLGGSHIAMALYIACGSRGFFYIFKTSRSARDLGVGGVSGVSGAGSGPGAGSIQFLALES 39
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TITLE OF INVENTION: RECOMEINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CELL. LINES
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 463; DB 3; Lenath 110; 100:0%; Pred, No. 2.1e-47;
                                                          Length 119;
                                                                                                  :ndels
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CURRENT APPLICATION DATA:
                                                        ch 190.0%; Score 46%; 0% %; 18 %; 18 %; 100.0%; Pred. No. 2.1e-47; 86; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                             Newgard, Christopher B.
Halban, Philippe A.
No. 6194176mington, Karl D.
                                                                                                                                                                                                                      61 SLOKRGIVEGCCTSICSLYQLENYON 86
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FILING DATE: Concurrently Relewit:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37,642
REFRENCE/DOCKET NUMBER: UTSD:513
TELECOMMUNICATION INFORMATION:
TELEPAN: 512/418-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION LATA:
PREDICATION NOMBER: 05 08/589.028
PRICK DATE: 19-48N-1996
ATCHEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arnold, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCH-SM/SCH-Dd
                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/08785271; Patent No. 6194176
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COMPUTER: 18M PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clark, Samuel A.
Thigpen, Anice E.
Quaade, Christian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 110 amino acids
amino acid
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MEDIUM TYPE: Floppy
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Best Local Similarity
Matches 86; Conserv
TOPOLOGY: linear
                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: Texas
COUNTRY: USA
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US-08-785-271-2
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
    ;
US-08-784-582-2
                                                                                                                                                                                                                                                                                                                                         US-08-785-271-2
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Query Match
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                                                                                                                                                                                                                                                                                  Sign Caps
                                                                                                                                                                                                                                   Sans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Profusulis Peptide Compounds for Detecting
TITLE OF INVENTION: and Treating Type I Blabetes
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                               160.0%; Scord 463; 38 4; Length 110; 160.0%; Pred. No. 2.16-42;
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                                                                                                                                                                                                                                 Mismatches
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NAME: DeConii, Giulio A., Jr.
REGISTON NUMBER: 31.603
REPERENCATION NUMBER: 31.603
REPERENCATION NUMBER: DCI-052PC
TELECOMMUNICATION INFORMATION:
TELEFHONE: (617)227-7400
INFORMATION FOR SEQ. ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                    61 SLOKRGIVECCTSICSLYCLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-POS/MS-POS
SOFTWARE: ASCIT Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/08596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSE: LAHIVE & COCKTIELD
STREET: 60 State Street, suito 510
CURRENT FILLING DATE: 1998-11-04
EARLIER APPLICATION NUMBER: 60/087,660
EARLIER FILLNG DATE: 1998-56-02
NUMBER OS END ID NOS: 11
SOFTWARE: Patentin Ver: 2.0
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APPLICATION NUMBER: US C8 FILING DATE: 08-JULY-199: CLASSIFICATION:
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Best Local Similarity 160.
Matches 86; Conservative
                                                                                                                                                                                             Query Match
Best Local Similarity 160.8
Matches 86, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                         ORGANISM: Homo sapiens
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CLASSIFICATION:
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STREET: 50 c.
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PCT-US95-08596-2
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                                                                                      SEQ ID NO 2
LENGTH: 115
                                                                                                                                                            US-09-185-852-2
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                                                                                                                          TYPE: PRI
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APPLICANT: Saco, Soiji
APPLICANT: Saco, Soiji
APPLICANT: Saco, Soiji
APPLICANT: Saco, Soiji
APPLICANT: Hquan Traniyuki
APPLICANT: Kondo, Masaaki
TITLE OF INVENTION: DREABAKING USEFUL POLYPEPTIDES THROUGH EXPRESSION OF THE
TITLE OF INVENTION: DNAS
FILE REPRENCE: 562.1026
CURRENT PRILICANTION NUMBER: US/39/280,630A
CURRENT PRILING DATE: 1999-63.26
EARLIER FILING DATE: 1999-63.26
EARLIER FILING DATE: 1999-63.31
NUMBER OF SEC ID NOS: 66
SOFTWARE: Patentin Ver. 2.0
SEC ID NO 63.31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32 FVNQHLCGSHLVEALYLVGERGFFYTPKTRREAEDLQVGQVELGGGPGAGSLQPLALEG 91
25 FVNQHLCGSHLVEAL/YLVCGERGFFYTPKTRREAEDLCVGOVFLGGGPGAGSLOPLALEG 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence: Designated is OTHER INFORMATION: an amino acid sequence of OTHER INFORMATION: MWPSp-MWPmpl0-Met-Proinsulin
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                                                                                        92 SLOKRGIVEQCCISICSLYQLENYCN 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 SLOKRGIVEQCCTSICSLYQLENYCN 86
                                                      61 SLOKRGIVEDCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                          Sequence 63, Application US/09280030A Patent, No. 6506595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100.
Matches 86: Conservative
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September 15, 2003, 12:03:35 ; Search time 36.0545 Seconds (without allgoments) 347:945 Million cell updates/sor
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1 FVNQHLGGSHLVFALYLVGG......TVFQCCTSICSLYQLENTON 96
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/cgn2_6/ptodata/1/pubpaa/USEG_REW_PUB.pep.*
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/cgn2_6/ptodata/1/pubpaa/USG%_PUBCOME.nepre
/cgn2_6/ptodata/1/pubpaa/USG%_NFW_PUH.pepre
/cyn2_6/ptodata/1/pubpaa/USS%_NFW_PUH.pepre
GenCore version 5,1,6
Copyright (c) 1993 - 2663 Compugen 1,6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                       541936 seqs, 145912426 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Published_Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                 OM protein . protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000600000
                                                                                                                                                                                                                                                        US-09-423-100-4
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                                                                                                                                                                                                                                                                                                                                                              Scoring table:
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                                                                                                                                                                                                                                                                                                              Sequence:
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Pred. No. is the number of results predicted by charge to have a score greater than or equal to the score of the result helps printed, and is derived by analysis of the total score distribution.

		Description	2008 11 90094098	Tank t accompany	Sodrange C. Soderbes	Sequence 4. Apply	٠.,	Sequence 125 App	Sequence 3. Appli	Section 6 Applie	Sequence 6. Appl:	Sequence 1. April					
STAMPRIES		CI	08-09-878-390-2	US-09-828-635B-4	US-10-028-410-2	US-10-054-873-4	US-09-947-563-4	US-09-205-658-125	US-09-815-229-3	US-09-864-4098-9	US-09-969-748C-6	US-10-038-696-1	US-10-328-813-2	US-09-280-030-63	US-09-280-030-62	US-09-947-563-5	US-09-925-297-805
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RESULT 2

Sequence 10, Appl	Sequence 13, Appl	5	Sequence 6, Appli	7	Sequence 5, Appli	m	18,	19,	3,	12	٦	ω,	. 1	a 12	10,	Sequence 10, Appl	Sequence 7, Appli	9	Seguence 5, Appli	a) O	7	13	13	Ξ	ä	14	9	134,	Sequence 4, Appli
-815-22	315-2	US-10-054-8	4 US-10-05	-10-054-873-	US-09-858-935	US-10-02	08-60-SD	US-09-861-6	US-10-066-0	US-09-736-611-1	US-09-736-611-	US-09-736-611-	US-09-740	US-09-89	US-09-740-3	US-09-894	US-09-740-359-7	US-09-736-	9 US-09-740-359-5	08-60-80	$\Omega$ S	US-09-205-658	-60-SD	-80	US-09-205-658	-60-SG	0 US-09-547-56	39-205-658-	9 US-09-815-229-4
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- CADELCANT: Pujitebio Inc.
- APPLICANT: Fujitebio Inc.
- APPLICANT: KURANO, Yoshihiro
- APPLICANT: KURANO, Yoshihiro
- APPLICANT: NAKATSUBG, Kaoru
- APPLICANT: NAKATSUBG, Kaoru
- APPLICANT: NAKATSUBG, Kaoru
- APPLICANT: NAKATSUBG, Kaoru
- ITTE DP INVENTION: Immunoassay For Measuring Human C-Peptide and Kit Therefor
- FILE REFERENCE: C760-0291P
- CURRENT PILLING DATE: 2001-06-12
- PATCR FILLING DATE: 2000-06-12
- NUMREK :P SED IN NOSE: 2
- SOFTWAKE: Patentin version 3.1
- SRC TAMARE: Patentin version 3.1 ó 1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGQVFLGGGPGAGSLQPLALEG 0 Length 86; Indels 100.0%; Score 463; DB 10; 100.0%; Pred. No. 9.7e-45; Live 0; Mismatches 0; 61 SLOKRGIVEQCCTSICSLYQLENYCN 86 Sequence 1, Application US/09678380 Patent No. US20020160435A1 Conservative ORGANISM: Homo sapiens Ouery Naich Bost Local Similarity Maiches 86; Conserv GENERAL INFORMATION RESULT 1 US:09-878-380-1 US-09-878:380-1 a C S ð

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US-05-947-563-4
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Pred. No. 9.78-48;
0: Mismatches 0;
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Sequence 4, Application US/098589358 Publication No. US200300691771 GENERAL INFORMATION:
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Matches 86; Conservative
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Best Local Similarity
Matches 86, Conserv
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US-10-028-410-2
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AFFLICATION RELATIONS RELATIONS FOR STATE OF INVENTION: Improved process for obtaining insulin precursors having correctly bonded cystine bri
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APPLICANT: Gan, Zhong Ru
TITLE OF INVENTION: Chimeric Protein Containing an
Intramolecular Chaperone-Like Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Finnegan, Henderson, Farrabow, Garrett &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 86;
                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIATE READABLE FORM:
MEDIATE THOPPY disk
COMPUTER: IBM PC COMPALIBLE
COMPUTER: IBM PC COMPALIBLE
COMPUTER: DALGEN: RELEASE #1.6, Version #1.30
CURRENT APPLICATION DATA:
FILLIO DATE: 22-Jan 2002
CLASSIFICATION: <a href="Contine">CURSION PROBRES: US/10/054,873</a>
FILLIO DATE: 22-Jan 2002
CLASSIFICATION: <a href="Contine">CURSION PROBRES: US/10/054,873</a>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                       NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
STREFT: Two Enhancedero Center, Eighth Floor
CIIY: San Francisco
STATF: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:

APPLICATION NOMBER: WO PCT/CN98/50052
FILING DATE: 31-MAR-1998
APPLICATION NOMBER: WO 09/423,100
FILING DATE: 11-DEC-2000
ATTORNEY/AGENT THYORMATION:
NAME: MYGTOFIL, Prank J
REGISTRATION NUMBER: 46,946
REFERENCE/FOCKET NUMBER: 026167-500130US
INFORMATION FOR SEQ 15 NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 86 aming acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 463; DB 14;
100.0%; Pred. No. 9.7e-45;
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 1300 I Street, N.W.
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GENERAL INFORMATION:
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TOPOLOGY: linear
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CCRRESPONDENCE ADDRESS:
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Best Local Similarity 100.0'
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                                                                                                                                                                                                                            COUNTRY: USA
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Sequence 3. Application US/59815229
Fatent No. 7320020058614A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Filvaroff, Ellen H.
APPLICANT: Filvaroff, Ellen H.
APPLICANT: FILVAROFF, Ellen H.
APPLICANT: FILVAROFF, Ellen H.
TILLE OF INVENTION: USE OF INSULIN FOR THE TREATMENT OF CARTILAGENOUS DISORDERS CURRENT FILMA DATE: 2001-03-22
CURRENT FILMA DATE: 2001-03-22
CURRENT FILMA DATE: 2001-03-24
NUMBER OF SEO ID NOS: 17
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                                                                                      . ITTE : THITETHER TO THE FILL HITTELLITE THE STANDARD GOOD GOOD CONTROL OF THE STANDARD BY TH
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Sequence 9, Application US/09804409A
Patcht No. US20020155100A1
GENERAL INFORMATION:
APPLICANT: KIEFFER, TIMOTHY 3.
APPLICANT: CEBUNG, ANTHONY 7.
TITLE 09 INVENTION: COMPOSITIONS AND METHODS FOR REGULATED PROTEIN
TITLE 09 INVENTION: COMPOSITION OF THE COMPOSITI
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Matches 86; /
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US-09-815-229-3
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Patent No. US20610020517a1
GENERAL INFORMATION:
APPLICANT: RUNKUN. GETY
APPLICANT: RUNKUN. GETY
TITLE OF INVENTION: IMPRARED GENOCES TOLERANGE CONTITIONS
FILE REFERENCE: GO786/351004
CURRENT APPLICATION NUMBER: US/99/205,658
CURRENT FILE OF THE 1998-12-03
EARLIER APPLICATION NUMBER: US/99/205,658
CURRENT FILENG DATE: 1998-12-03
EARLIER PILLON DOWNER: US/99/205,658
EARLIER PILLON DOWNER: US/99/205,658
EARLIER PILLON UNMBER: US/99/205,658
EARLIER PILLON UNMBER: US/99/205,658
EARLIER FILLNG DATE: 1997-05-15
SOFTWARE: FASESO for Windows Version 4.0
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                                      Patentic Release #1.0, Version #1.30
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TELECOMMONICATION INCEMENTION:
TELEVINE: (202) 4.08-4400
INFORMATION FOR SEV. 15 0.01
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
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                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/347,543
FILING DATE: 07-Sep-2001
CLASSIFICATION: <Unknown>
OPERATING SYSTEM: FC -DOS/MS-DOS
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PRIOR APPLICATION WINHER: 69/134,836
FILING DATE: <U:known>
ATTOHNEY/AGENT INFORMATION:
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SEQUENCE DESCRIPTION: SEQ ID NO: 4:
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REGISTRATION NUMBER: 34,872
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STRANDEDNESS: single
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MOLECULE TYPE: protein
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Matches 86; Conservative
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LENGIH: 110
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                                               25 FVNQHIGGSHLVFALYLVGERGFFYIPKTRRPABDLQVGQVELGGGPGAGSLQPLALEG 84
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ORGANISM: Artificial Sequence

PEATURE:
CTHER INFORMATION: Description of Artificial Sequence: Designated is
OTHER INFORMATION: an amino acid sequence of
OTHER INFORMATION: MWF8p-MWPmp10-Met-Proinsulin
US-05-280-030-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT OSPOTON, William R.A.
APPLICANT OSPOTON, William R.A.
APPLICANT Remesh, Negarajan
TIILE OF LINENING Compositions and Methods for Treating Diabetes
FILE REFERENCE: P-04 3269
CURRENT APPLICATION NUMBER: US/10/328,813
CURRENT RILNS DAIR: 1508-12-23
PRICK APPLICATION NUMBER: US/59/185,852
PRICK APPLICATION NUMBER: US/59/185,852
PRICK APPLICATION NUMBER: US/59/185,852
PRICK APPLICATION NUMBER: 1998-11-34
PRICK APPLICATION NUMBER: 1998-11-34
PRICK APPLICATION NUMBER: 1998-06-02
PRICK APPLICATION NUMBER: 1998-06-02
PRICK APPLICATION NUMBER: US/59/185
PRICK APPL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 15;
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100.0%; Pred. No. 1.3e-44;
tive 0; Mismatches 0;
                                                                                                                                                  61 SLOKRGIVEQCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application 75/10328813 Publication No. US20630113365A1 GENERAL INFORMATION:
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Best Local Similarity 106.
Matches 86, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PKT OKGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                            RESULT 11
15-10-328-813-2
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                                                                                                                      DS-UV-969-746C-6

Sequence 6, Application US/25969748C

Sequence 6, Application NG US203016/8594;

GENERAL INFORMATION:

APPLICANT ARIZEKE FHARMACEUTICALS, INC.

APPLICANT: SHERDAN: PRILIS.

APPLICANT: SHERDAN: PRILIS.

APPLICANT: GLYNN, Jacquolich, M.

FILE REFRENCE: 05722-033

CURRENT APPLICATION NUMBER: US 60/248,819

PRIOR FILING DATE: 2009-11:-13

PRIOR FILING: 11:-13

PRIOR FILING DATE: 2009-11:-13

PRIOR FILING: 11:-13

PRIOR FILING DATE: 2009-11:-13

PRIOR FILING: 11:-13

PRIOR FILING: 1
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Publication No. US20030045467a1
GENERAL INFORMATION:
FAPLICATE OF INVENTION: AUTOANTIGEN VACCINE
FILE REFERENCE: 10276-067001
CURRENT APPLICATION NUMBER: 007010
CURRENT APPLICATION NUMBER: 60/260,069
PRIOR PULICATION NUMBER: 60/260,069
PRIOR FILING DATE: 2002-05-31
PRIOR PULICATION NUMBER: 60/260,069
PRIOR FILING DATE: 2001-01-05
NUMBER OF SRQ ID NOS: 6
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85 SLOKRGIVEQCCISICSLYQLENYCN 110
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Best Local Similarity 100.
Matches 86; Conservative
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Best Local Similarity 160.
Matches 86, Conservative
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; ORGANISM: Homo sapiens
US-10-038-686-1
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OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids NAME/KEY: SITE
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Falcal No. US2022088[59A1
CANEXAL INFORMATION:
APPLICAMI: Rosen et. a.
TITLE CF INVENTION: Nucleic Acids, Proteins and Antibodics
FILE REFERENCE: PAIOS
CURRENT APPLICATION NUMBER: US/09/925.297
CURRENT APPLICATION NUMBER: PCT/US00/05989
PRIOR APPLICATION NUMBER: PCT/US00/05989
PRIOR APPLICATION NUMBER: 6C/124,270
FRIOR APPLICATION NUMBER: 6C/124,270
FRIOR FILING DATE: 1200-03-08
FRIOR FILING DATE: 1909-03-12
NUMBER OF SEQ IO NOS: 929
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98.7%; Score 457; DB 10; Longth 96; 100.0%; Pred. No. 5.2e-44; tive C; Mismatches 0; Indels
                                                                              COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OFERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURNENT APPLICATION DATA:
APPLICATION NUMBER: US/05/947,563
FILING DATE: 07-Sep-2001
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION CATA:

APPLICATION NUMBER: 09/134.836
FILING CATE: 4.0AKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: Leslie MCDONel:
REGISTATION NUMBER: 34,872
REFERENCE/DOCKET NUMBER: 02481.1600-00000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
TELEFAX: (202) 408-4400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Escherichia coli
    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ICPOLOGY: linear
MCLECULE TYPE: protein
ORIGINAL SOURCE:
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SEQUENCE CHARACTERISTICS:
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LOCATION: 1..96
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CRGANISM: Homo sapiens
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Best Local Similarity
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Keller, Reinhold
TITLE OF INVENTION: Improved process for obtaining
insulin precursors having correctly bended cystang bridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Sato, Selji
APPLICANT: Higashikuni, Naohiko
APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Masaaki
APPLICANT: Kondo, Masaaki
APPLICANT: TITLE OF INVENTION: DNAS
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THILL CHILL CHILL CHILL THIS THE CHILL CHILL THE CHILL THE CHILL
                                                                                                                                                                  1 FUNOFILGSSHIVEALYLVGGEROFFYTPKTRREABILLOVRUVELGGGRGAGSLGPLALFG 60
                                                                                                                                                                                                       Gates
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, Henderson, Farrabow, Garrett, 6
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    Losgick 112;
Cuery Match 170.0%; Score 463; 78.9;
Best Local Similarity 100.0%; Pred. No. 1.4c-44;
Matches 86; Conservative 0; Mismatches 0;
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CURRENI APPLICATION NUMBER: US/09/285,630A
CURRENI FILING DATE: 1999-03-26
BARLIER APPLICATION NUMBER: ,1P16-87339/1998
BARLIER FILING DATE: 1998-03-31
                                                                                                                                                                                                                                                                                                                                                                 92 SLOKRGIVEQCCTSICSLYQLENYCN 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 SIGKRGIVEQCCTSICSLYQUANYON 86
| 1111-1.1111 | 1111-1 | 1111
| 125 SIQKRGIVEQCCTSICSLYQUENYON 130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 62, Application US/09280033A
Patent No. US20013021515A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5, Application US/09947563
Patent No. US20020156234A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
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STATE: D.C.
COUNTRY: USA
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SEQ ID NO 62
LENGIH: 130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-280-630-62
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LOCATION: (92)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-action debts
NAME/KEY: STTE
LOCATION: (105)
OTHER INFORMATION: Xaa equals any of the naturally occurring L-action debts
NAME/KEY: STTE
LOCATION: (124)
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NAME/KEY: STTE
LOCATION: (132)
OTHER INFORMATION: Xaa equals any of the naturally occurring comming tolds
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Search completed: September 15, 2003, 12:23:35 Job time : 36.0645 secs

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Query Match Best Local Similarity 96.7%: Pred. No. 5.7% 22: Matches 58; Conservative G. Mismatches 2; Indels

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283308

Total number of hits satisfying chosen parameters:

283308 segs, 96168682 residues

Searched:

Maximum Match 100% Listing first 45 summaries pirl:\* PIR\_76:\* Database :

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## ALIGNMENTS

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Cispecies: Homo sapiens (man)

Cibaces 22-060-1981 *sequence_revision 23-0ct-1981 *text_change 08-Dec-2000

Cibaces 22-0691225, A91225, A91225, A91251; A91344; A92075; A91186; I58114; A0157

SiRell, G.I.; Pictet, R.L.; Rutter, W.J.; Cordell, B.; Tischer, E.; Goodman, H.M.

Nature 284, 26-32, 1980

Airtle: Sequence of the numan insulin genc.

Airtle: Sequence of the numan insulin genc.
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A. Residues: 1-10 < U.L. A. Retter, M.J. A. Retter, M.J. B. B. Goodman, H.M.: Rutter, W.J. Maiure 282, 525-527, 1979

Maiure 282, 1970

Maiure 282, 1970

Maiure 282, 1970

Maiure 19
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K:Sures, 1.: Goeddel, D.V.; Gray, A.: Ullrich, A.
Schode 208, 57-59, 1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A)Cross-retorences: SB-J00265; NID:g186429; PIDN:AAA59172.1; PID:g386828 FNicol, D.S.H.W.; Smith, L.F. Mature 187, 485-485, 1960 A)TITLO: Anino-acid Sequence of human insulin. A)Reference number: A93144
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A:Rosidues: 25-54;90-110 <NIC>
R:Oyer: P.E.; Fulo, S.: Peterson, J.D.; Steinor, D.F.
J. Biol, Chem. 246, 1375-1386, 1971
                                                                                                                                                           insulin precursor (validated) - human
                                                                                                                                                                                                                            N;Alternate names: preproinsulin
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A;Molecule type: protein
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A;Residues: 1-110 <SUR>
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A:Residues: 57-87 (CVE)

R:KO, A.; Smyth, D.G.: Markussen, J.; Sundby, F.

Bur, J. Biochem, 20, 190-199, 1972

A:Title: Amino and sequence of the C-peptide of numas profisuils.

A:Reference number: A91186; MULE:71257722; PMID:5560494

A:Recession: A91186

A:Recession: A91186

A:Residues: 57-87 (KOA)

R:Lucassen, A.M.; Julier: C.; Beressi, J.P.; Poitard, C.; Froquel, F.; Mathrop, M.; Bell Nature Genet, 4, 305-310, 1993

A:Title: Susceptibility to insulin dependent dishesus mellitus maps to B:11 kb seament A:Reference number: 158114; MULE:9384428; PMID:838446

A:Reference number: 158114; MULE:9384428; PMID:838446

A:Reference number: 158114; MULE:9384428; PMID:838446

A:Residues: 1-59-83-110 (RES)

A:Resid
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A;Contents: annotation; synthesis of residues 57-87
B;Kaufmann, J.E.; Irringer, J.C.; Halban, P.A.
Biochem J. 310, 869-874, 1995
A;Tile: Sequence requirements for proinsulin processing at the B-chain/2 pyptide junctiA;Reference number: $58661; MUID:96013185; PMID:7555420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Affile: Totalsynthese von Humaninsulin under gegloffer Bildung der Dis Alldninduren. A.Reference number: A91636; KJTD:7507227; PMID:444399; A.Contents: annotation: Synthesis
A.Contents: annotation: Synthesis
A.Note: distlide-bonded human insulin was synthesized; the synthetic holdene was inequal A.Note: article in German with English abstract
R.Note: unticle in German with English abstract
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Ayfirle: Synthesis of the complete sequence of human proinsulin Chyerlide
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A,Gene: GDB:INS
A,Cene: GDB:INS
A,Cene: GDB:INS
A,Map position: 11pi5.5-1ipi5.5
A;Introns: 63/1
C,Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: insulin
C;Superfamily: insulin chain B #status experimental cRCH>
F)25-54,90-1i0/Pomain: insulin #status experimental cRCH>
F)25-54,90-1i0/Pomain: insulin #status experimental cRCH>
F)25-54,90-1i0/Pomain: connecting C peptide #status experimental cRCH>
F)50-110/Domain: connecting C peptide #status experimental cRCH>
F)90-110/Domain: insulin chain A fatatus experimental cRCH>
F)90-110/Domain: insulin chain A fatatus experimental cRCH>
F)31-96,43-i09,95-i00/Disulfide bonds: #status experimental
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A:Title: The synthesis of C-poptide of Sumar profits! [11]
A:Reference number: A93-558, MJD-7504-5067; PMIC-(6-3504)
A:Contents: annotation: synthesis of residues 57-67
B:Geiger, B.: Baeger, G.: Rechiq, W.
Chem. Bor. 106, 2347-2352, 1973
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100.0%; Pred. No. 2.8e-43;
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Cispecters Cercoptiteeus acultay
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Cispecters Cercoptiteeus Cercision 18 Nov-1994 *text_change 16-Jul-1999
Cispecters Cercoptiteeus Cercoptiteeu
Alitle: Sequences of primate insulin genes support the hypothesis of a slower rate A/Rocession: A42179; MUID:92219953; PMID:1560757
A/Rocession: A42179
A/Rocession: A
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Pred. No. 1.6e-42;
0; Mismatches 1: Indels
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100.0%; Pred. No. 2.8e-43;
iive 0; Mismatches 0;
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A:Molecule type: protein
A:Molecule type: Drotein
A:Residues: 25-54;00110 <SMII>
B:Peterson, 5.D., Wehrlich, S.; Oyer, P.E.; Steiner, D.F.
J. Biol. Chem. 247, 4866-4871, 1972
A:Title: Determination of the amino acid sequence of the monkey, sheep, and dog pr
A:Reforence number: A92111; MUID:72258016; PMID:4626369
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A)Resioncs: 1-30;66-86 <HAR>
R)Tager, H.S.: Steiner, D.F.
J. Biol. Chem. 247, 7936-7940, 1972
A)Tile: Primary structures of the proinsulin connecting peptides of the rat and hA)Reference number: A92120; MUID:73061498; PMID:4640931
                                                                                                                                                                                                                                                                                           Axittle: Cloning and nuclectide sequence analysis of the dog insulingene. Coded Axaterence number: A92413; MUID:83109071; PMID:6296142
Axacession: A92413
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C.Date: 13-Jul-1581 #sequence_revision 13-Jul-1981 #text_change 16-Jul-1599
C.Dates: 13-Jul-1580 A92120
A:Harris, J.I., Sanger, F.: Naughton, M.A.
Arch. Blochem. Blophys, 65, 427-428, 1956
A;Title: Species differences in insulin.
                                                                                                                                                                               Species: Canis iupus lamiliaris (dog)
Clotte: 24-Apr 1984 #sequence_revision 15-Nov-1984 #text_change 16-Jul-1999
Clotte: 24-Apr 1988; #Sl6493
Clotte: 28.C.M.: A9248; #Sl6493
J. Riol. Chan. 258, 2357-2363, 1983
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A:Reference number: A90029; MUID:66160119; PMID:5949593
A:Accession: A01587
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A Recidues 5-85, 17,87 < PET>
C Superfamily: insulin
C Keywords: hormone; pancreas
F:1-24/Domain: signal sequence #status predicted <SIG>
F:25-54,70main: insulin #status experimental <BCH>
F:25-54,90-Li0/Product: insulin #status experimental <MAT>
F:27-87/Domain: connecting peptide #status experimental <MAT>
F:92-110/Domain: insulin chain A #status experimental <ACM:
F:31-196,43-109,95-100/D:sulfide bonds: #status experimental
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89.5%; Pred. No. 2.9c-38;
tive 1; Mismatches 8
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                                61 SLOKRGIVEQCOTSICSLYQLENYON 86
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Rest Local Similarity 89.59
Watches 77: Conservative
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A; Residues: 1-110 <SMI>
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                                                                                                                                                                                                                                                                                                                                                                                                                               R:Smith, L.F.
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                                              Insulin precursor - crab-earing macaque
C:Species: Macacu éssciontaris (crab-earing macaque)
C:Species: Macacu éssciontaris (crab-earing macaque)
C:Datc. 07-56p-1990 | Requence_revision 37-Sep-1990 | Ftext_change in Mill-, v6.
C;Accession: J00178
R:Wetekam W.: Gronoberq, J.: Leineweber, M.: Wenteumayer, F.: Winnacker, E...
Gene 19, 179-183, 1962
A;Title: The machoridge sequence of chan coding for preproiselis from the primate Minac
A;Reference number: J00178 | MUTH: 83080474; PMID: 6184862
A;Releasion: J00178
A;Releasion: J00178
A;Releasion: J00178
A;Releasion: J00178
C;Superior milly insulin
B;1-34/Domain: signal sequence Estatus predicted vSIG>
F;25-54,90-110/Product: Insulin Estatus predicted vSIG>
F;25-84/Domain: insulin chain B status predicted vSCH>
F;55-89/Domain: insulin chain A status predicted vACH>
F;31-96,43-109,95-100/Disuifide bonds: #status predicted
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Best Local Similarity 90.7*
Thus 78: Conservative
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Best Local Similarity 64.99
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A;Residues: 1-110 <WEN>
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A: Accession: A92120
A: Molecule type: protein
A: Molecule type: protein
A: Molecule type: protein
A: Molecule type: 33 - 4763
C: Commont: 33 - 4763
C: Commont: 35 at positions 31-32 and 64-65 represent paired basic residens assured (by C: Superfamily: insulin
C: Superfamily: insulin
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Almolecule type: DNA
Almolecule type: DNA
Algesidus: 1-116 - GLOMA
Algesidus: 1-116 - GLOMA
Algesidus: D.F.; Clark, d.L.; Novan, C.; Rubenstein, A.H.; Marqollash, E.; Aren, B.;
Recent Prog. Horm, Res. 25, 207-282, 1969
Alfille: Proinsulin and the biosynthesis of insulin.
A.Reference number: A94231; MUID:70067613; PMID:4311936
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Cispecies: Rattus norvegious (Norway rat)
Cispecies: Rattus norvegious (Norway rat)
Cispecies: Rattus norvegious (Norway rat)
Cispecies: Rattus norvegious (1900 p. 1900 p. 1
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A Residues: 1-110 <RES>
A Cross-references: GB:M25595, NID:9204550; PIDN:AAA41440.1; PID:9204952
C)Genetics:
A:Genetics:
A:Geneti
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Pred. No. 7.26-36:
1; Mismatches 12: indels
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F;7-72,19-85,71-76/Disulfide bonds: #status predicted
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A.Status: preliminary: translated from GB/EMBL/DDRJ
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Best Local Similarity 84.5%
watches 73; Conservative
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A:Titie: Reversed-phase high-performance liquid chromatographic analyses of insulin
A:Reference number: A6:012: WJID:89292078; PMID:2661585
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Cyspecies: Mus musculus (house mouse)
Cybecesis: Mar-1992 #sequence_revision 14-Jul-1994 #text_change 18-Jun-1999
Cybecesion: A26342; B48112: A61012; B01592
Cybecesion: A26342; B4812; P86
Fykertworth, B.W.; Schaefer, I.W.; Vilia-Komaroff, L.; Chirgwin, J.M.
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P:Sawa, I.: Obgaku, S.; Morioka, H.; Yano, S.
P:Sawa, I.: Obgaku, S.; Morioka, H.; Yano, S.
C. Mol. Endocrinol. S. 61-67, 1990
A.Title: Molecular cloning and DNA sequence analysis of preproinsulin genes in the A:Reference number: A48172; MUID:90372989; PMID:2397023
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A:Residues: 57-87 <LIN>
A:Residues: 57-87 <LIN>
A:Buenzli, H.F.; Glatthaar, B.; Kinz, P.; Muelhaupt, E.; Humbel, R.E.
Hoppe-Seyler's Z. Physiol. Chem. 353, 451-458, 1972
A:Tt.e. Anino acid sequence of the two insulins from mouse (Mus musculus).
A:Reterence number: A01592: MUID:72189455; PMID:5063718
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Score 394; DB 1; Length 110;
Pred, No. 9.2e-36;
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Pred. No. 9.2e-36;
4; Mismatches 9; Indels
                                                                            9: Indels
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A.Residues: 25-54;90-11C <BSE>
Genetics: 34:90-11C <BSE>
C.Grotics: 63/1
C.Superfamily: insulin
C.Keywords: hormone; pancreas
F:1-24/Domain: signal sequence #status predicted <SIG>
F:25-54/Domain: insulin chain B #status experimental <BCH>
F:25-54/90-110/Product: insulin #status experimental <MAT>
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E:Linde, S.: Nielser, J.B.; Hansen, B.; Welinder, B.S.
J. Chromatogr. 462, 243-254, 1989
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                                                                            4; Mismatches
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Conservative 4; Mismatch
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As Residues: 1-116 <CCR.
Astronomical Books and Books and Stratiatists. Publicated Books references: 38-J00747; NIDIG204956; PIDNIAAA41442.1; PIDIG2049957
Astronomical Books and Resemble Rose Formations and Rose Books Astronomical Books and Rose Books Astronomical Books Books
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A Molecular type: protein
A Molecular type: protein
B Tager: H.S.: Steiner, D.F.
J. Blob. Chem. 247, 7936-7940, 1972
J. Blob. Chem. 247, 7936-7940, 1972
A.Tillo: Primary structures of the proinsulin connecting poptides of the rat and h
A; Reference number: A9212C; MUID:73061498; PMID:4640931
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A:Residios: 1-110 <LONA
A:Residio
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Cispecies: Sis scrota domestica (domestic pig)
Cispecies: Sis scrota domestica (domestic pig)
Cispecies: Sis scrota domestica (domestic scrota)
Cispecies: Sistematical soliss: R.M.; Bromer, M.W.
Science 161, 165-167, 1968
A.Tille: Porcine proinstin: characterization and amino acid sequence.
A.Reference number: A41240; MCID:68286488; PMID:5657063
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M. Mesidues: 57-87 <1Mo.
R. Homedico, P. T.: Rosenthal, N.: Kolodner, R.: Efstratladis, A.: Gilbert,
Ann. N. Y. Acad. Sci. 343, 425-432, 1980
A.Tit.e: The structure of rat preproinsulin genes.
A:Reference number: I51945; MUID:80240379; PMID:6249167
A:Accession: I51945
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C)Genetics:
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C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: insulin
C.Superfamily: insulin
P.25-54/Zomain: signal sequence #status predicted <SIG>
P.25-54/Zomain: insulin chain B #status experimental <BGH>
P.25-54/90-110/Product: insulin *status experimental <MAT>
P.27-87/Zomain: connecting peptide #status experimental <CPE>
P.90-110/Domain: insulin chain A #status experimental <ACH>
P.31-96.41-109,95-100/Disuifide bonds: *status experimental
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Hest Local Similarity 83.7%; Pred. No. 8.8e-35;
Matches 72; Conservative 4; Mismatches 10.
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A;Molecule type: DNA
A;Residues: 1-110 <RES>
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A;Residues: 1-34,'O',36-84 <CHA>
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                                                                                                                                         Insulin precursor - deuroscouli
C.Species: Actus trivirgatus (deuroscott, night mensay, aw. markay)
C.Date: 27-Nov-1901 #sequence_ravision 27 Nov-1901 #text_change 16-1-1 fee.
C.Accession: A39883
R.Schoo, S.J. Stefner, D.F.J. Bell, G.I.
Proc. Natl. Acad. Sci. U.S.A. 84, 7432-7427, 1967
A.Titler Squence of a New Morld primate itsulin having low biological potency and image A.Reference cumber: A39883; MUID:88041119; PMID:3118487
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CiSpecies: Rattus norvegicus (Norway rat)
CiSpecies: Rattus norvegicus (Norway rat)
CiSpecies: Rattus norvegicus (Norway rat)
CiSpecies: 23-0ct-1981 #sequence_nevision 23-0ct-1981 #text_change 24 Shp-1999
CiAccession: A90786; A90789; A94231; B92120; 151945; A01589
RCordall, B.; Bell, G.; Tischer, E.; Denoto, F.M.; Ullrich, A.; Bistot, P.; Rutter, Octl 18, 533-543, 1879
Arithe: Isocation and characterization of a choned rat (nsulin gene.
A:Reference number: A90788; MCID:80045034; PMID:498283
A;Mocession: A90788
A:Molecule type: DNA
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02-Jul 1996 #text_change 16 Int-1999
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A)Molecule type: DNA
A)Residucs: L108 <SEI>
A)Cross-references: GR:J02969; NID:q176559; PIDN:AAAN9374.1: PID:q176558
C)Superfamily: insulin
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A.Cross-references: GR:M26328; NID:9:91420; PIDN:AAA37089.1; PID:q:0f2360
C:Superfamily: insulin
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Cibeches Mescericatus auratus (golden hamster)
Cibete: 02-501-1996 #sequence_revision 02-501-1996 #text_change 166
CiAccession: 148166 #sequence_revision 02-501-1996 #text_change 166
CiAccession: 148166 #sequence_revision 02-501-1996 #text_change 166
Diabetes 33, 29-7305, 1984
A:Title: Sequence or a cDNA encoding Syrian hamster prepronsulta.
A:Reference comber: 148166 MC(D):84133036; PMID:836563
A:Status; preliminary; translated from 3H/EMBL/IDBJ
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84.9%; Pred, No. 1.5e-35;
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Matches 73, Conservative
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Matches 73: Conserv
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A.Molecule type: protein
A.Molecule type: protein
A.Residues: 57-82 <SAL>
A.Sanger, F. Thompson, E.G.P.
Blochem, J. 53, 366-374, 1953
A.Title: The amino-acid sequence in the qlycyl chain of insulin. Z. The investigati
A.Reforence number: A90342
A.Molecule type: protein
A.Residues: 85-105 <SAN>
B.Sanger, F.: Tuppy, H.
B.Sanger, F.: Tuppy, H.
B.Sanger, F.: Tuppy, H.
B.Sanger, A. 49, 481-496, 1951
A.Title: The amino-acid sequence in the phenylalanyl chain of insulin. Z. The investigation of insuline variance in the present of insuline z. The investigation of insuline variance in the present of insuline z. The investigation of insuline variance in the present of insuline variance in the insuline variance in the insuline variance in the insuline variance in the investigation of insuline variance in the insul
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Arkoleous s610, 37, 32-42, 77, 44-54 <CH2>
Arkoleous J. 60, 541-556, 1955
Arithes The disulphace bonds of insulin.
Arkoleous annotation amides; disulfides
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Arkoleous J. 905-209, 1994
Arkoleous Arkoleous amides annoted amoleous ruler in proceasomos suggested by analysis of deg
Arkoleous number: $46258; MCID:94326921; PMID:8050567
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AlAccession: A90341
AlAccession: Type: protein
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Bir. J. Blochem. 223, 759-764, 1994
Alithe: Strespecific oxidation of histidine residues in glycated insulin mediated
Alaccession: S48184: MUID:9433378; PMID:8055951
                                                                                                                                                                                                                                                                                  A.Title: Bovine proinsulin: amino acid sequence of the C-peptide isolated from panch Reference number: ASI185: MUID:71257721; PMID:5105368
A.Accession: A91185
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A) Status: preliminary
A) Status: preliminary
A) Molecule type: pretein
A) Molecule type: pretein
C) Superfamily: insulin
C) Superfamily: insulin
C) Superfamily: insulin
C) Superfamily: insulin
C) Status experimental (B)
C) S4/Domain: signal sequence #status predicted (SIG)
C) S5-54/Domain: insulin chain # status experimental (MAT)
F) S5-54/B5-105/Domain: connecting peptide #status experimental (CPEP)
F) S1-82/Domain: insulin chain # #status experimental (CPEP)
F) S1-91/43-104,90-95/Disulfide bonds: #status experimental
                                                                        A:Wolecule type: protein
A:Residues: 57-82 <STE.
K:Salodkangas, A.: Smyth, D.G.; Markussen, J.; Sundby, F.
Eur. J. B.cochem. 20, 183-189, 1971
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80.2%; Pred. No. 8.7e-33;
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A.Residues: 33-62 -582.

Adv. Blundell, T., Eodson, G.; Hodakin, D.; Mercela, D.

Adv. Protein Chem. 26 -279-402, 1972.

A.Title: Isasiin, the structure in the crystal and the intellection in chemistry and high

A.Reference unmber: A9017.

A.Rohenter: annotation: X-ray crystallography, 1.9 mastroms

C.Superfamily: Historia

C.Superfamily: Historia

F.1-30/Domain: insulin chain & *status experimental - NAI>

F.1-30/Domain: connecting peptide *status experimental - NAI>

F.1-30/Domain: insulin *status experimental - ACR>

F.64-64/Domain: insulin *status experimental - ACR>

F.64-64/Domain: insulin chain & *status experimental - ACR>

F.7-70.19-83,69-74/Disulfide bonds: *status experimental
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A.Residues: 33-78,40-62 <SNE>
A.Residues: 33-78,40-62 <SNE>
A.Residues: 33-78,40-62 <SNE>
A.Accession: B60835
A.Molecule type: protein
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A.Residues: 25-105 <NCL>
A.Residues: 25-105 <NCL>
A.Residues: 25-105 <NCL>
B.Steiner, D.F., Oyor, P.E., Terris, S.: Peterson, d.D.: Ribenstein, A.H., J. Biol. Chem. 245, 1385-1374, 1971
A.Title: Isolation and characterization of proinsulin C-peptide from Levine pancreas.
A.Reference number: A92074; MUID:71116469; PMID:5545089
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86.6%; Pred. No. 1.1e-34;
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R;Snel, L.; Damgaard, U.
R;Snel, L.; Damgaard, U.
Horm. Metab. Res. 20, 476-480, 1988
A/Title: Proinsulin heterogeneity in pigs.
A;Reference number: A60835; MJL1:89032178; PMJD:31M1865
A;Accession: A60835
A, Accession: A94572
A: Molecule type: protein
A; Redides: 1-84 CGIS-7
A; Residues: 1-84 CGIS-7
B; Brown, H.; Sanger, F.; Kitai, R.
Biochem. J. 60, 556-565, 1955
A; Ittie: The structure of pig ard sheep insulins.
A; Accession: $16492
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Matches 74; Cosservative
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A;Residues: 1-30;31-51 <BRO>
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Copecies: Mas musculus (house neuse)

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Concession: 8263-21 Ad61-22 Ad6-522 Respirace, raysison 1-1-1-94 stown; than the Apri-968 Respirace, raysison 1-1-1-96 Residue.

J. Mol. Evol. 24, 364-32 108

A. Millier Concern maker: A2265 Muslier 108-75 PRINICAASE(4, 1) PIT-052/13

A. Molecule type. InA.

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A. Molecule type. InA.

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Scoring table:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000005500

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RESULT I
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-!-SUBCHII: BETERNOTHER OF A B CHAIN AND AN A CHAIN LINKED BY TWO DISCUELIDE BONDS.
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Mammalia; Eutheria; Primates; Catarrhini: Cercopithecidae;
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InterPro: IPP054825: Ins/IGF/relax.
Pfam: PF06049: Insulic: 1.
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Mol. Biol. Evol. 9:193-203(1992).
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NCBL_TaxID-9534;
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1. SIMILARITY: BELONGS TO THE INSULIN/IGF/RFLAXIN FAMILY.

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-I- SUBGNIT: HETEROSIMER OF A B CHAIN AND AN A CHAIN LINKED HY TWO
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Eukaryota; Metazca; Chordata; Craniata; Vertebrata; Euteleostoni;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Sequences of primate insulin genes support the hypothemsis slower rate of molecular evolution in humans and apes than
        Length II
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O
100.0%; Score 463; LP 1:
100.0%; Pred. No. 5.26-43;
Live 3; Mismatches 3:
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61-APR-1993 (Rel. 25, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
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INSULIN A CHAIN.
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Seino S., Bell G.I., Li W.;
"Sequences of primate insulin genes
                                                                                                                                                                                                                                                                                                                                                 61 SLOKEGIVEUCHTSICSHYGLENYIN
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PDB: 1EFE: 29-MAK-66.
INCOPPO: 1PK004825; Ins/IGF/relax.
PER: PF00049; Ins211:: 1
PRINTS; PR0277; INSULNS.
SMAKT; SM00078: 100F: 2.
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                                            Best Local Similarity 100.
Matches 86, Conservative
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                                                                             1 FVNQHIGGSHLVEALYLVCGERGFFYTPKTRREAEDLOVGOVELGGGFGAGSIJPLATEG (*);
                                                                                                           <u>~</u>
                                                                                          25 FVNQELGGSHLVEALYLVGGERGFFYTPKTRRRAEDPQVGQVELGGGFGASGASGLQPLALEG
                                              Silve
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Gene 19:179-183(1962)
-1- FUNCION: INSULIN DECREDARS BLOCD GLICCOSE CONTENTEATHON, 17
-1- FUNCEASES COLL PERMEABILLITY TO MONOSACCHARIDES. ANIMO ACTIOS AND FATTY ACIDS. IT ACCELERATES GLACOLYSIS, THE FENTOSE PROSPERIE CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-1- SUBUNIT: HEFERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY 1W.
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                                                                                                                                                                                                                                                                                                                                                         Madaca fascicularis (Grap eating madaque) (Cynomolgus monkey).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleosfor
Mammalia; Eutheria; Primates; Catarriini; Corcopithecidae;
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             Score 456; ER 1: Longth 110:
Pred. No. 5.2e-42;
0: Mismatches 1: indels
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Wetekam M., Groneberg J., Leineweber M., Wendenmayer F.,
Winnacker E.-L.;
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R PIR; J00.78; J06.178
R HSSP; P01308: 1AI0.
R RICEPTO: IPRO04825: Ins/ICF/relax.
Pfam; PF0649: Insulin: :
R PRINTS; PR00277; INSULINE.
R PROSTTE; PS00262: INSULINE.
R PROSTTE; PS00262: INSULINE.
Insulin family; Hormone: Glucose metabolism; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11991 MW; 83C6E33A80A420E9 CBC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 456; DB ::
Pred. No. 5.2e-42;
                                                                                                                                                                                                                                                              #30406 Pt1309;
21-3UL-1986 (Rel. 01, Created)
13-AJG-1987 (Rel. 05, Last sequence update)
13-FEB-1996 (Rel. 33, Last ennotation update)
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C PEPTIDE.
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                                                                                                                                                         INTERCHAIN
                                                                                                                                         61 SLOKKGIVEQCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                 PRT;
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98,88;
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                                              Conservative
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43
95
110 AA;
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Best Local Similarity
              Query Match
Best Local Similarity
Matches 85: Conserv
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                                                                                                                                                                                                                                                                                                                               Insulin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_Tax10=9541;
                                                                                                                                                                                                                                                 INS_MACFA
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                                                           1 FUNDHEGGSHIVEALYLVCGERGFFYTPKTRREAEDLUVGQVELGGGPGAGSIQPLALEG 69 (1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'Insulin gene expression and insulin synthesis in mammalian neuronal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 56-110 FROM N.A. GEGLING S.J.; Carnaghi L.R., Devaskar S.G.; Carnaghi L.R., Devaskar S.G.; Carnaghi L. the EMBL/Genback/Obbi databases.
-!- FUNCTION: INSULIN DECREASES BLOOD GLOCOSE CONCENTRATION. IT INCREASES CELL PENNEABILITY TO MONOSACCHARIDES. AKINO ACIDS AND FATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHATE CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SUBJUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO DISULFIDE BOUSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Crycholaqus cuniculus (Rabbit).
Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-New Zealand white, IISSUB-Panoreas:
MEDLINE-94179270; PubMed-8132571;
Devaskar S.U., Giddings S.U., Rajakumar P.A., Carnagbi L.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Species variation in the amino acid sequence of insulin."; Am. J. Med. 40:652-666(1966).
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-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
Indels
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01-FEB-1996 (Rel. 33, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
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0; Mismatches
                                                                                                                                                                                                                                    SLOKRGIVEQCCTSICSLYQLENYCN 110
                                                                                                                                                                                                 61 SLOKRGIVEOCCTSICSLYQLENYCN 86
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MEDIINE-66160119; PubMed-5949593;
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85; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Devaskar S.U., Giddin
Menop R.K., Zahm D.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ssulin precursor.
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Am. J. Med. 40:652-666(1966).
-!- FUNCTION: INSCLID DECREASES BLOOD SIGGOSE CONDENTRALICN. IT
INCREASES CELL PERMEAHILITY TO MONDACCHARIDES, AMINO ACIDS AND
FATTY ACIDS. IT ACCELEMATES GLYCOLYSIS, HE PENTOSE PHOSPHATE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SUBJUILT: HFTERODIMER OF A 5 CHAIN AND AN A CHAIN LINKED BY TWO
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Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDELKE-83109071; PubMed-6296142;
Kwok S.C.M., Chan S.J., Steiner D.F.;
"Cloning and nucleotide sequence analysis of the dog insulin
Coded amino acid sequence of canine preproinsulin predicts an
                                                                                                                              Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFIDE BONDS.
--- SUBCELLULAR LOCATION: Secreted.
--- SIMILARITY: BELONGS TO THE INSULIN/IGE/BECANIN FAMILY.
                                                                                                                                                                   5; Indels
                                                              E => Y (IN REF. 3).
82D2975885D77PA8 CR064:
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                                                                                                                          91.6%; Score 424: UB 1; 90.7%; Pred. No. 1.4e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last Sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
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  INTERCHAIN
                       INTERCHAIN
                                                                                                                                                                                                                                                                                         61 SLOKRGIVEGCCTSTCSLYGLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             al C-peptide fragment.";
Chem. 258:2357-2:63(1983).
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Pam, PF0049; Insulin; l.
SMART; SMO075E LIGE; l.
PROSITE: PS00252; INSULIN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                       P.R.T.;
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MEDLINE-66160119; PubMed=5949593;
96 13
109 18
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83 E
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Best Local Similarity 90...
Thes 78: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
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31
43
195
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110 AA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insulin precursor.
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CONFLICT
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                                                                                                                                                                                                                                                                  Gaps
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Tredrea M.M., Buck M.J., Guhaniyogi J., Squire I.L., Andrews M.T.;
Requilation of PDK4 expression in a hibernating mammal.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELL PERMEABILITY TO MONGSACCHARIDES, AMINO ACIDS AND
FATTY ACIDS. IT ACCELERATES GLUCULYSIS, THE PENTOSE PHOSPHATE
CYCLE, AND GLYCOCEN SYNTHESIS IN LYVER.
-!- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Spormophilus tridecemlineatus (Thirteen-lined ground squirrel).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Eutelecstomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Sciuridae; Sciurinae;
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G
                                                                                                                                                        Length 110;
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INTERCHAIN (BY SIMILARITY).
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                                                                                                            12190 MW; A574791864A4FB98 CKC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insulin family, Hormone, Glucose metabolism, Signal STGNAL.
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                                                                                                                                                   Score 417; DB 1;
Pred. No. 7.7e-38;
1: Mismatches 8
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15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
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                    INSULIN A CHAIN.
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Interpro: PRRO4E25; ins/1GF/relax.
Piam: PF00049; insulin; J.
PRINTS; PR05277; INSULINB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AY038604; AAK72558.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SKART; SM06078; ILGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                        Local Similaries
es 77; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
87
210
96
100
100
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                                                                                                            110 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insulin precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-43179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Pancreas;
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90
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                  CHAIN
DISCLEID
DISCLEID
DISCLEID
SECCENCE
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INS2_MOUSE
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                                                                                         INS2_MOUSE
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                                                                                       25 FVNQBLCGSBILVEALYL/ZCGERGFFYTPKSRREVERQOGGQVELGGGFGGGFLAJER 84
                                                                        1 FVNQHLCGSHLVEALYLYCGERGFFYTPKTRREAEDLQVGQVELGGGFGAGSLGFLALEG 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -:- SUBCELLUIAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSTITUTOF/RELAXIN FAMILY.
-:- CAUTION: X'S AI POSITIONS 31-32 AND 64-65 REPRESENT FAIRED BASIC RESIDUES ASSUMED BY HOMOLOGY TO BE PRESENT IN THE PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tager H.S., Stainer D.F., "Primary structures of the proinsulin connecting peptides of the rat and the horse.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Biol. Chem. 247:7936-7940(1972).
-1- FUNCTION: INSCILIN DECREASES BLOCO GLUCOSE CONCENTRATION. IT.
INCREASES CELL PERMEABLIST TO MONOSACCHARITES, AMINO ACIDS AND
FATIY ACIDS. IT ACCELEMATES GLYCOLASIS, THE PENTOSE PHOSPHATE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa: Chordata, Craniata: Vercebrata; Eutoloostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                              Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CYCLE, NOTICE TO COLLEGATION OF VEHICLIANS, THE PENIOSE PHOSPER CYCLE, ND GLYCOGEN SYNTHESIS IN LIVER.

SUBUKIT: HETEROLIMER OF A 3 CHAIN AND AN A CHAIN LINKED BY DISULFIDE HONDS.
             Score 413; EB 1; Length 110;
Pred. No. 2e-37;
3: Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 394; DB 1: Longth 86; Pred. No. 1.7e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Indels
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                                                                                                                                                                                                                                                              21-00L-1986 (Rel. 31, Created)
21-30L-1986 (Rel. 31, Last Sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INSULIN B CHAIN. C PEPTIDE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INSULIN A CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hormone, Glucose metabolism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                                                                                                                                                                                                                                        85
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"Species differences in insulin.";
Arch. Bicchem. Biophys. 65 427 438(1986).
                                                                                                                                               INTERCHAIN
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                                                                                                                                 61 SLQKRGIVEQCCTSICS_YQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro: TPR004825; Ins/IGF/relax.
Pfam: PF00049; Insulto; 1.
SMART; SM00078; IIGF: 1.
                                                                                                                                                                                                                                        PKT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 33-6%.
MEDLINE-73061498: PubMed:4640931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS00262; INSULIN; 1.
               89.28:
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84.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1-30 AND 66-85
Ouery Match
Best Local Similarity 89.5%
Conservative
77, Conservative
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                                                                                                                                                                                                                                                                                                                                        Equus caballus (Horse).
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72
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76
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HSSP; P01317; 1AP
                                                                                                                                                                                                                                                                                                             Insulin precursor
                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-9795;
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Best Local Simi
Matches 73:
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between the Swiss Institute of Bioinformatics and the EMBL outstation the Employment of Broinformatics in the are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin family; Hormone; Glucose metabolism; Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sawa T., Ohyaku S., Moricka H., Yano S.; "Molecular cloning and DNA sequence analysis of preproinsulin genes in the NON mouse, an animal model of human non-obese, non-insulin-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCULT HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED HY TWO
                                                                                                                                                                                                                         Bukaryota: Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Marmalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                 MEDLINE-87169768, PubMed-3104663;
Wentworth B.M., Schaefer I.M., Villa-Komaroff I., Chirgwin J.M.,
"Characterization of the two nonallelic genes encoding mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -i- SUBCEELULAR LOCATION: Secreted.
-i- SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
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00; 3D:0000187; Pisacivation of MAPK; IDA.
00; 3D:0042325; P:requiation of phosphorylation; IDA.
Interpro; IPR004825; Ins/IGF/relax.
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INSULIN 2 C PEPTIDE.
INSULIN 2 A CHAIN.
INTERCHAIN.
                                                                                                                              21-30L-1966 (Rel. 03, Created)
13-AUG-1967 (Rel. 05, Last sequence update)
15-OCT-2001 (Rel. 46, Last annotation update)
61 SLOKRGIVEGGCISICSLYQLENYCN 86
               61 PQQXXGIVEOCCIGICSIAQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dependent diabetes mellitus.";
7. Nol. Endocrinol. 5:61-67(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=90372989; PubMed+2397023;
                                                                                                                                                                                                                                                                                                                                             preproinsulin.";
J. Mol. Evol. 23:305-312(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X04724; CAA28433.1; -. PIR; A26342; INMS2.
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SMART; SMU0078; ILGF; 1.
                                                                                                       STANDARD;
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54
87
110
96
                                                                                                                                                                                                            Mus musculus (Mouse)
                                                                                                                                                                               Insulin 2 precursor.
INS2 OR INS-2.
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                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     NCB:_TaxID::10090;
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INS_ACTIR
P10604;
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                                                                                         1 FVNOHLOGSHLVBALYLVDGBRGFFYTPKTRRAÆFLLQVSGVELGSSPGAQVTJGFALLAS
                                                                                                   25 FVKOHLGOSHLVBALYLVJOBROFFYTPKSRRRVBCPOVAGLET GJOPAGDET BLEAD.
                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa: Chordata, Craniala, Verlebrala: Eulaleos'omi;
Mammalia; Eutheria; Rodentia; Sciarognathi; Muridae; Murinac; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tager H.S., Steiner D.F.; "Primary structures of the proinsulin consecting periods of the last and the horse.";
                                                                                                                                                                                                                                                                                                                                                                                                  The structure and evolution of the two nonallelic rat preproinsulin
                                                                                                                                                                                                                                                                                                                                                      STRAIN-Spraque-Dawley; TISSUE-Liver;
MEDLINE-80045035: PubMed-496284;
Lomedico P., Rosonthal N., Efstratladis A., Gilbert W., Rolodner R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Steiner D.F., Clark J.L., Nolan C., Rubenstein A.E., Margeliash E., Aten B., Oyer P.E., "Proinsulin and the biosynthesis of insulin."; Recent Prog. Horm. Res. 25:207-282(1969).
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-86310882: Pubyed-2427935;
Soares M.B., Schin E., Henderson A., Karathanasis S.K., Cate R.,
Zeitlin S., Chiriwin C., Fistratiadis A.,
"RNA-mediated gene duplication: the rat preproinsulin I gene is
functional retroposon."
                                            Length 115:
                                                                  F: Indexs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=80240379; PubMed=6249167;
Lomedico P.T., Rosenthal N., Rolodner R., Efstratisdis
Gilbert W.:
"The structure of rat preprofusulle genes.".
                       12364 MW: 3554C8803D24FDAD CHO74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-72:77385; PubMed-4554164;
Markusson J., Sundby F.:
"Rat-proinsulin C'Peptides, Amino-acid sequences.";
                                           Score 394; DR 1;
Pred, No. 2,20-35;
4; Mismatches 3;
                                                                                                                                                                                                                              21-JUL-1986 (Rol. 01, Created)
21-JUL-1986 (Rol. 01, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                 61 SLCKRGIVEGCESICSLYQLENYON 96 (1.1111) | 11111 | 11111 | 135 AQQKRGIVDGCTSICSLYQLENYON 110
   LVHENCHAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ann. N.Y. Acad. Sci. 343:425:432(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biol. Chem. 247:7936-7940(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cell. Biol. 5:2090-2103(1985).
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MEDLINE=70067613; PubMed-4311938:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=73061498; PubMed=4640931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 57:87, AND REVISIONS
                                            th PSimilarity 84.9%; 73; Conservative 4
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                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
   2 G
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                                                                                                                                                                                                                                                                  Insulin 2 precursor.
                     1:0 AA;
                                                       Sest Local Similarity
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DISULFID
DISULFID
SEQUENCE
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                                             Query Match
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INS2_RAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insulin family; Hormone; Glucose metabolism; Signal; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25 FVKQHLGGSHLVENELYLVCGFRGFFYTPMSRREVEDPQVAQLELGGGGGGAGDLOTALEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FVNQHT/GGS::LVEALY1/VCGEKGFFYTPKTREAEDLQVGQVEL/GGGPGAGSLQPLALEG
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Sainris sciureus (Common squirrel monkey).
Eukaryota: Metazoa: Charordata: Craniata: Verlebrata: Buteleostomi:
Mammalia; Eutheria: Primates; Platyrrhini; Cebidae; Aotinae; Aotus.
FUNCTION: 115-152(1972).

-!- FUNCTION: INSULIN DECREASES BLOCD GLUCOSE CONCENTRATION. IT INCREASES CELL PERMENBILITY TO MONOSACCHARIDES, AMINO ACLDS ANI FATTY ACIDS. IT ACCELERATES GAYCOLYSIS, THE PENTICSE PHOSPHATE CYCLE. AND GLYCOGEN SYNTHESIS IN LIVER.

-!- SUCCEST AND GLYCOGEN SYNTHESIS IN LIVER.

-!- SUCCESTED BONDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=88041119; PubMed-3118367;
Seinc S., Steiner D.F., Bell G.I.;
"Sequence of a New World primate insulin having low biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 110;
                                                                                                                                                                                                                                                  SUBCELGULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSCLIN/IGE/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24 INSULIN 2 B CHAIN.
67 INSULIN 2 C PEFIDE.
110 INSULIN 2 A CHAIN.
96 INTERCRAIN.
109 INTERCHAIN.
100
4, 12339 MW; 3A626DA98C86F3CA CRC64;
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84.9%; Pred. No. 2.2e-35;
iive 4; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         potency and immunoreactivity.";
Proc. Nati. Acad. Sci. U.S.A. 84:7423-7427(1987).
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01-JUL-1989 (Rel. 11, Last sequence update)
16-001-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR004825; Ins/IGF/relax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; M25585; AAA41440.1; -. MBL; M25589; AAA41440.1; JOINED. PTR: 890769; IPRT2. HSSP: PC1317; IAPH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; V01243; CAA24560.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS00262; INSULIN; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Piam: PF00049; insulin; 1.
SMART; SM00078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 84.9
nes 73; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9505, 9521;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPECTES-A.trivirgatus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               110 AA;
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G.I., Sanchez-Pescador R.,
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                              SPECIES-S Sciurcis;

WEDINE-9/086993; PUDMOG-22/1627;

WEDINE-9/086993; PUDMOG-22/1627;

WEDINE-9/086993; PUDMOG-22/1627;

WEDINE-9/086993; PUDMOG-22/1627;

"Isolation and amino acid sequences of squirrel monkey (Salmiri Sciurce) insulin acid shoots on 1.

FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CHUCKHIANTON. IT INCREASES CHIL PERMARMILITY OF MONGSACCHARIDES. AMINO ACIDS AND FUTTY ACIDS. IN ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHAIE CYCLE, AND GLYCOCK SYNCHESIS IN LIVER.

FORTILL HOSPINGER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
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Eukaryota; Metazoa: Chordata; Craniata; Vertebrata: Euteleosicmi;
Mammalia; Eutheria; Rodentic; Sciurognathi: Muridae; Cricetinae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             insulin family, Hormone: Giucose metabolism; Signa.
SIGNAL 1
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Pred. Rc. 3.56-35:
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INSULIN A CHAIN.
INTERCHAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INSULIN B CHAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84.7%;
84.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 84.9
les 73; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR: A39683; A39883.
HSSP: P01308; 1HIS.
                                                                                                                                                                                                                                    DISULFIDE BONDS
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SOUR PROPERTY SOURCE CONTRACTOR C
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                               -:- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT INCREASES CEL. PERREABILITY TO MONOSACCHARIDES, AKTNO ACIDS ANE FATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHATE CYCLE, AND GLYCOGEN SYNHAESIS IN LIVER.
                                                                                                                                                                          SEGUENCE OF 25-54 AND 96-116.
Neelon F.A., Deforer H.K., Steinman H., Lebovitz H.E.;
Neelon F.A., Deforer H.K.; Steinman H., Lebovitz H.E.;
Structure of hamster insulin: comparison with a tumor insulin.";
Fed. Proc. 32:300-300(1973).
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Cordell B., Bell G.L., Tischer E., Denoto F.M., Ullrich A.,
Pictet R.L., Rutter W.J., Goodman H.M.;
"Isolation and characterization of a cloned rat insulin gene.":
"Sequence of a cDNA encoding Syrian hamster preproinsulin."; Diabetes 33:297-300(1984).
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84.9%; Pred, No. 3.6e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -:- SUBCELLUIAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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16-OCT-2001 (Rel. 40, Last annotation update)
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C PEPTIDE.
INSULIN A CHAIN.
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Matches 73, Conservative
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INSI OR INS-1.
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Length 110;

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83.28;
Coery Match
Bost Local Similarity 83.7%
Marches 72; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Insulin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-9823;
                                                                                                                                                                                                                                                                                                                                                                                                         P01315; 09TSJ5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REVISION TO 59.
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                                                                                                                                                                                                                                                                                                                             RESULT 14
INS_PIG
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Insulin family: Hormone: Glucose metabolism: Signal: Multigene tamily.
                                                                                                                                                        Fixard R.: The structure and evolution of the two completic rat preparations of the \alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tager H.S., Steiner D.F.; **Primary structures of the proinsulin connecting peptides of the run and the horse.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 25-54 AND 90-110.
MEDLINE=70067013; PubMed=4111938;
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MEDLINE-80240379; PubMed-6249167;
Lomedico P.T., Roscuthal N., Kolodner R., Elstrafiadis A.,
Gilbert W.;
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SUBCELLULAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULAN/IGE/RELAXIK FAMILY.
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INSULIN 1 C PEPTIDE.
INSULIN 1 A CHAIN.
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Ann. N.Y. Acad. Sei. 343:425-432(1980).
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Pfam; PPUG049; Insulin; i.
SMART; SMG0078; ilGF; i.
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                                                                              STRAIN-Spraque-Dawley: TISKUS-U.M
MEDLINE-80045035: Fubmed-4%F284;
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EMBL: J0047; AAA41442...
EMBL: M2584, AAA41439...
PTR: A90788; FPTI.
HSSP: P01308: 1A7F.
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  Cell 18:533-543(1979).
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                                                                                       X-fay CRYSTALLOGRAPHY (1.5 ANGSTROMS).
MEDLINE=89099316; PubMed=2905485;
Baker E.N., Blundell T.L., Cutfield J.F., Cutfield S.M., Dodson E.J.,
Dodson G.G., Crowfroot Hodgkin D.M., Hubbard R.E., Isaacs N.K.,
Reynolds C.D., Sakabe K., Sakabe N., Vijayan N.M.;
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Philos. Trans. R. Soc. Lond., B, Biol. Sci. 319:369-456(1988).
                                  Gaps
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INSECT NWA, Agarwal R.C.;
"Experience with fast Fourier least squares in the refinement of the
"Experience with fast Fourier least squares in the refinement of the
crystal structure of thombohedral 2-zinc insulin at 1.5-A
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Mammalia; Eutheria: Cetartiodactyla; Suina; Suidae; Sus.
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Chance R.E., Ellis K.M., Bromer W.W.;
"Porcine proinsulin: characterization and amino acid sequence.";
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STRAIN-Large white:
MEDLINE-22138558; PubMed-12140686;
Amarger V., Nuyen M., Laere A.S., Braunschweig M., Nezer C.,
Georges M., Andersson L.;
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Rlundell T.5., Dodson G.5., Hodgkin D., Mercola D.;
Tishlin, The structure in the crystal and its reflection in
chemistry and blology.";
Adv. Protein Chem. 26:279-402(1972).
         2e-34;
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Hen X.G., Tuch B.E.;
"Control of the Control of the Sequence.";
Submitted (MAY-1998) to the EMB./Genbank/DDBJ databases.
Score 385; DB 1;
Pred. No. 2e-34;
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16-OCT-2001 (Rel. 46, Last sequence update)
28-FEB-2003 (Rel. 41, Last amotation update)
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                                    4; Mismatches
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                                                                                                                                         61 SLOKRGIVEQCCTSICSLYOLENYCN 86
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01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last Seg
15-JUL-1998 (Rel. 36, Last anno
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                  Best Local Similarity 86.0 Matches 74; Conservative
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Best Local Similarity
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                                                                                                                                                                               Insulin precursor
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                                                                                                Insulin family; Hormone, Glicose metabolism; Signal; 35-structure.
SIGNAL 1 24
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SINCIARITY BELONGS TO THE INSULN/ISF/RELAXIN FAMILY.
BATARASE: NAME=FOLIGIN Spotlight:
NOTE=:Ssuc 9 of April 260;
WWW="http://www.expasy.org/spotlight/aithdes/spulf-69.htm"
        Balschmidt P., Hansen P.B., Dodson E., Dodson G., Korber P.:
"Structure of porcine insulin occrystallized with chupeine R.":
Acta Crystallour, B 47:975-986(1991).
                                         X-RAY CRYSTALLOGRAPHY.
MEDGING-92225410;
Badger J., Harris M.F., Reynolds C.D., Evans A.D., Dodson E.D.,
Dodson G.G., North A.C., T.
                                                                           the cubic crystal.";
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                                                                                                                                                                                                                                                                                                                EMBL: AF064555; AAC77920.1; ALT_INIT.
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MEDLINE=92126280; PubMed-1772633;
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41NS; 31-JUL 94.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Baloinformatics and the FMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb.ch/announce/or send an email to license@isb.ch.ch).
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"Increases of the Permeases blood Glucose Concentration. II INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND FAITY ACCIDS. THE PENTOSE PHOSPHATE CYCLE, AND GLYCOGEN SYMPHESIS IN LIVER.

"SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
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Button J.C., Gross D.C.,
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Gerbillinae,
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Score 383; DB 1; Length 108
Pred. No. 3.3e-34;
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-1-SIMELARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
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Pfam; PF00049; Insulin; 1.
PRINIS; PR06277; INSCLINB.
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Eukaryota: Metazca; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pongo.
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Stead J.D.H., Jeffreys A.J.;
Waplotype diversity at the insulin region.";
Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.
EMBL: AY137503; AAN06937.1; -
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Last sequence update)
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           Copyright (c) 1993 - 2003 Comp.sem tea.
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C'hUigin C., Tichy H., Klein J.; "Molecular evolution in higher primates; gene specific and organism specific characteristics."; "Submitted (MAR-2002) to UHE EMBL/GenBank/DDBJ databases.
EMBL: AY092023: AAM76640.1: -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gorilla gorilla (gorilla).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Gorilla.
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                                                                                            Spermophilus tridecemlineatus (Thirteen-line) ground squirre).
Eukaryota, Metazoa: Chordata; Craniata: Vertebrata: Buteleostomi;
Mammalla: Eutheria: Rodentia; Sciurognathi; Sciuridae; Sciurinae;
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                                                                                                                                                                                                                                                                                                                                               Tredrea M.M., Buck M.J., Guhaniyogi J., Squire T.L., Andrews "Regulation of PDK4 expression in a hibernating mammal."; Submitted (JUNY-201) to the EMBL/GenBark/NDBJ databases.
-- SUBMILLED LOCATION: SECRETED (BY SIMILARITY).
-- SIMILARITY: BELGNGS TO THE INSULIN/16F/FELAXIN FAMILY.
-- HARSP; P01308; ILNF.
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-1. SIMILARITY: BELONGS IC THE INSULIN/IGE/WEMAXIN FAMILY.
EMBL: AE043535: BAB84110.1; -
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"cat insulin.";
Submitted (MAY-2000) to the EMBL/GenBank/DDEL databases.
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Pram: PFC0049; Insulin: 1.
PRINTS; PR0527; INSULINE.
SMART: SM0078; ILSE: 1.
PROSITE; PS00262; INSULIN: 1.
SEQUENCE 110 AA: 12069 MM; 95FB6E170075ECA4 CRC64;
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SEQUENCE 110 AA: 12004 MW; 4512768D6622BEES CRC64;
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Eukaryota: Metazoa: Chordata; Cranista; Vertuberia;
Marmalia; Eutheria; Carnivora: Fissipedia, Pelidao;
01-DEC-2001 (ireMSLrel. 19, Last Sequence update) 01-MAR-2003 (TrEMSLrel. 2). Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61-WAR-2002 (TEBMShrel, 20, Chested)
01-WAR-2002 (TEBMShrel, 20, Last sequence update)
01-WAR-2003 (TEBMShel, 2), Last annetation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
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83.7%; Pred. No. 3.1e+38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45 ALOKRGIVEDCOTSICELYOLENICH 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SLOKRGIVECOCTSTOCLYQLENYON 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aterPro: IPR004825: Ins/IGF/relax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF50049; Insulin; PRINTS; PR60277; INSULINB. SMART: SMO0078; ELGF; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Similarity 89.5
Matches 77; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 83.79
Matches 72, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUE-Pangreas:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                       NCBI_TaxID-43179;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE Pancreas:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Preproinsulin.
                                                                                                                                                                                                Spermophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                      7 COSHIVEALYLVCGERGFFYTPKTRREAEDLØVGQVELGGGFGAGSLQPLALEGSLQKRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 CGSHLVEALYIVCGERGFFYTPKTRREAEDLQVGQVELGGGFGAGSLQPLALEGSLQKRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C'EUrgin C. Tichy H., Klein C.; "Molecular evolution in higher primates; gene specific and organism specific characteristics."; Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AY092024; AAM76641.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eskaryola, Motazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Pongo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
  Length 65;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 AA; 6920 MW; B772017FD8BCABEA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        73.9%; Score 342; DB 6; I 100.0%; Pred. No. 4.7e-33; tive 0; Mismatches 0;
73.9%; Score 342; DB 6; 1
100.0%; Pred. No. 4.7e-33;
        100.0%; Pred. ....
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SO DE REPRESENTATION DE LA COMPANSION DE

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                                                                                                                                                                                                                                                                                                                                  3 NQHIJGGSHIJVEALYILVGGERGFFYTPKTRREAEDIJVGQVELGGGPGAGSLOPLALEGSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 NQHLCGSHLVEALYLVCGERGFFYTPKTRRRAEDLQVGQVELGGGPGAGSLQPLAL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Actinopterygii, Neopterygii, Teleostei, Osteoglossomorpha,
Osteoglossiformos, Pantodontidae, Pantodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hiodon alosoidės (goldėye).
Eukaryota, Metazoa; Chordala, Craniata; Vertebrata; Eutelcostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49.8%; Score 230.5; DB 13; Length 110; 46.4%; Pred. No. 1.4e-19; Live 14; Mismatches 13; Indels 25;
                                                                                                                                                                                            56.9%; Score 235.5; DB 13; Length 111; 54.1%; Pred. No. 3.7e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BDECCD659D872E06 CRC64;
                                                                                                                                         SEQUENCE 111 AA; 12491 MW; AC9519D2D4865D20 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Preproinsulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34 ADEYPYKDGGDLKVRGIVEGCCHPCUIFDEGNYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59 *** - EGSLQ-KRGIVEQCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          110 AA
                                                                                                                                                                                                                                                    12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                63 O-KRGIVEOCCISICSIYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                %1-DBC-2001 (TrEMBSrel. 19, Created)
%1-DBC-2001 (TrEMBSrel. 19, Last seq
%1-DBC-2003 (TrEMBSrel. 23, Last and
Preproinsulin (Fragmont).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pantodon buchholtzi (Butterflyfish)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro, IPR004825; Ins/IGF/relax. Pram; Pr00409; Insulin: 1. SMART; SM00078; IIGF; i. SPRSYTE; PS00525; INSULIN: 1. SEQUENCE 110 AA: 12324 MW; BDEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT:
  Pfam; PF00649; Insulin; I. PRINTS; PR06277; INSULINB. SMART: SM00078; IIGF: I. PR06ITE: PS00262; INSULIN; I.
                                                                                                                                                                                                                        54.18;
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Fest Local Similarity 46.49
Matches 45; Conservative
                                                                                                                                                                                                                                                    46; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP: P01308; 1HIS
                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-8276;
                                                                                                                                                                                              Query Match
                                                                                                                NON TER
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                                                                                                                                                                                                                                                    Matches
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0902Y1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35: Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Irwin D.M., Sivarajah P.;
*Proinsulin cDNAs from the leopard frog, kana pipiens: evolution of
proinsulin processing.*;
                                                                                                                                                                                                    COLDING, CONTINUAL PROFILED FOR A CONTINUAL CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordita, Cramiata, Vertebrata, Eutelenstumi:
Actinopterygii: Neopterygii: Teleostel: Osteorlossemorpha.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53.28; Score 246.5; UR 13; Length 106; 51.58; Pred; No. 1.7e-21; UVe 5; Mismatches 7; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Al-Mahrouki A.A., Irwic D.M., Graham D.C., Folson J.B., Molecular clonding of prestolistific ciras from several estaggiossomorphs and a cyprintal.

19 SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

19 SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

EMBL, AF195589. AAX28713.1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Comp. Blochem. Physiol. 1258:405-410(2D00).
-!- SUBCELULAR LOCATION: SECRETED (BY SIMILARITY).
--- SIMILARITY: HELONGS TO THE INSULIN/TOF/REHAXIN FAMILY.
EMBL: AF227187; AAP87285.1; --
ESSP; P01315; 1SDD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106 AA; 12183 MW; 3A870EEC70217F92 CRC54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OGSELDEMOVOSOAFQKRKPGIVEQCCHNICSLYDLENYON 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2001 (TremmStret, 17, dast sequence update) 01-MAR-2002 (TremmEurel, 2), dast annotation update)
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                                                                                                                                                                                              106 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.1 A.A.
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Osteoglossum bicirrhosum (silver alawana)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLiel, 17, Created)
                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FRT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro: IPR0C4825; Ins/IGF/relax
Pram: PR00045; Insalin: 1.
PRINTS: PR0C277: INSULINE.
SMART: SM00078; ILGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1)
SEQUENCE FROM N.A.
MEDLINE-20362507; Pubmed-10818274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-21203577; PubMed=11305171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE: PS02262: INSULEN: 1. SEQUENCE 106 AA: 12183 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 51.5
Matches 52; Conservative
                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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                                    IVEQC 65
67 IVEOR 71
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Q98TA7
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---- -- OKRGIVEOCCTSICSLYQLENYCN 86
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Best Local Similarity
Trhes 44; Conserva
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CBAIN 86
SECUENCE 108 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P01308; 11.PH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                      Insulia precursor.
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61 SL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Preproinsulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cyprinidae:
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                                                                                                                                                                         Q9DDE5
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                                                                                                                          RESULT 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26 SQHLCGSHLVDALYHVCGEKGFFYQPKTKNVVV -------PILJGFLSFKSAJENG 21
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Chitala chitala (clown knifetish).
Ebkaryotas Merazoa, Chordata; Cranista; Vertebrata; Eutelvostomi-
Bukaryotas merazoa, Chordata; Cranista; Vertebrata; Eutelvostomi-
Actinopteryqii; Negeleryqii; Teleostoi; Ostebralossomorpha:
Osteoglossiformes; Notopteridae: Chitala.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.18; Score 222.5; UB 13; Length 110;
45.48; Pred. No. 1.3e/18;
tive 13; Mismatches 15; Indels 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-21203577; FubMed-11306171;
A AL-Mahookit A.A.; Irwin D.M., Graban L.C., Yousen J.H.:
ANACHOLISE A.A.; Irwin D.M., Graban L.C., Yousen J.H.:
Molectiar cloning of preprintation conservoral
costeoqiossomorphs and a cyptimid.
D. Cell. Endocrinol. 174:58 (201).
C.-: SUBCELLGRAN LOCATION SECRETE (NY SUMILARITY).
C.-: SUBCELLGRAN LOCATION SECRETE (NY SUMILARITY).
R. MARZEP, POL308: LAM.
R. RISSP: POL308: LAM.
R. RISSP: POL306: LAM.
R. Interpro; IPRO04825; Ins/ISF/relax.
R. RISSP: MO00049: Insulin; 1.
R. NOM_ISR
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                                                                                                               MEDILINE-21203377; PubMedw-1130617;
Al-Mahrouki A.A., Irwin D.M., Graham L.C., Youson J.H.;
Al-Mahrouki A.A., Irwin D.M., Graham L.C., Youson J.H.;
Modecular cloning of prefroitsulin conversal
osteoglossomorphs and a cyprinid ":
Mol. Cell. Endocrino! 174:55-58(2001).
-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
HSSP; PO1308: 11.NP.
Actinopterygli: Neopterygli: Teleostel: Ostvoglossomorpha:
Osteoglossiformes: Elodontidae: Hiodon.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE 110 AA; 12343 MW; BDECCD7703E52E06 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61-00N-2001 (TrEMBLrel, 17, Created)
61-00N-2001 (TrEMBLrel, 17, Last sequence update)
61-MAR-2003 (TrEMBLrel, 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADEYPYKDQQDLKVRCIVEQCCHAPCNIFDLNOYON 11*
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                                                                                                                                                                                                                                                                                                                                        InterPro; 1PR054825; Ins/IGF/relax. Pfam: PrC0049; Insulin: 1. PRINTS; PR0227; INSULINS. SMART: SM03078; IIGF; I. PROSITE: PS00262; INSULIN: 1. NON_TER 110 110
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datches 44; Conservative
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Matches 48; Conservative
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                                               NCBI_TaxID-54904;
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SEQUENCE
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4 OHLOGSHUVEALYLVCGERGFFYTPKTRREAEDLQVQQVBLGGGFGAGSLQFLALEGS=+ 61
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Eukaryota: Metazou: Chordata: Craniata: Vertcbrata: Euteleostomi:
Actinopteryqii: Neopteryqii: Teleostei; Ostariophysi: Cypriniformes:
Cyprinidae; Danio.
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Actinopterygii; Neopterygii; Teleostei; Ostarlophysi; Cypriniformes;
Cyprinidae: Catla.
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Bandyopadhyaya I., Wakabayasi K.;
"A new cell secreting insulin.";
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                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=99425190; PubMed=1049529.;
MEDLINE=99425190; PubMed=1049529.;
Margenton F., Zecchin E., Bortolussi M.;
Early appearance of pancreatic hormone-expressing cells in section of the markyo.;
Medi, Dev. 87:217-221(1995).
Medi, Dev. 87:217-221(1995).
Medi, BrillARITY BELONGS TO THE INSULINIGE/RELAXIN FAMILY.
FINILARITY BELONGS TO THE INSULINIGE/RELAXIN FAMILY.
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INSULIN B CHAIN.
INSULIN A CHAIN.
3195289E72AD5D25 CRC64;
                                                                                                                                              OGDUES;

O-MAR-2001 (17EMBLrel. 16, Created)

01-WAR-2001 (TFEMBLrel. 16, Last sequence update)

01-WAR-2003 (TFEMBLrel. 23, Last annotation update)
Last sequence update)
Last annotation update)
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C1-DEC-2001 (TrEMBLrel, 19, Last sequ
Ol-MAR-2003 (TrEMBLrel, 23, Last anno
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interPro; IPR064825; Ins/IGF/relax.
Parm; PP00045; Insulin; 1.
PRINGS; PR00277: LNSULINB.
                                                                                                                          PRT;
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                                                                                                                          PRECEMINARY;
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Score 203.5;
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                                                                                                                                                                     Preproinsulia (Fragment).
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Best Local Similarity
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation epdate)
Preproficeuine (Fragment).
Preproficeuine petersi.
Bukaryola: Metazoa: Chordata; Craniata: Vertebraia: Euteleostemi:
Actioopterygii: Neopterygii: Teleoste: Osteoglossomorpha;
Osteoglossiformes: Mormyr.dae: Gnathonemus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45.5% Score 212.5; DH 13: Loughh 108; 44.8% Pred. No. 1.9e*17;
Uve 12: Mismatches 14: infols 27;
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Al-Mahrouki A.A., Irwin D.M., Grahar L.C., Youson C.E.;
"Molecular cloning of preproinsulin conas."
I "Molecular cloning and a cyprinid".
Mol. Cell. Endocrinol. 174:51-56(201).
I SUBCELLUIAR (CCATION: SECRETE) (BY SIMILARLY).
I SUBCELLUIAR (CCATION: SECRETE) (BY SIMILARLY).
RMBL: AR199587; ARX28711...
RSSP: P01308 1H:3.
INCEPTO: TER034825; INS/ICF/relax.
RESP: P01308: INS/ICF/relax.
REAM. P700040; INS/ICF/relax.
SMART; SMG0076: INFF: 1.
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Submitted (APR-2001) to the EMBL/Gerbank/Make datalines.
-!- SUBCELLOTAR LOCATION: SECRETES (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE INSULIN/IGE/MARAXIN FAMILY.
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Schee 43, Conservative
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HSSP: P01308; 11NP.
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01-30N-2001 (TrEMBLrel. 17, Last sequence update)
01-30N-2001 (TrEMBLrel. 23, Last annotation update)
01-MBR-2003 (TrEMBment).
Ambioplites rupestris (Rock bass).
Enkaryota, Mctaza: Chordata, Graniata; Vertobrata; Enteleostomi,
Actinoplerygii; Neoplerygii; Teleostei: Enteleostei; Neoteleostei;
Centrarchidae: Amblopiites.
                                                                                                                                         Catestomus commersoni (White sucker).
Enkaryota, Metazoa, Chordala, Craniala, Vertebrata, Euteleostomi,
Actinopterygii, Neopterygii, Teleostei, Ostariophysi, Cyprinilormes,
Catestomides, Catestomus.
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"Molecular clocking of preproincell round from the rock bass.";
Submitted (OCT-1999) to the EMBLGGenRank/DDBJ databases.
-- SUHCELDUAR JOCATION: SECRETED (HY SIMILARITY).
-- STATLARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
HSSP; PC1308: 1LPH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44.4%; Score 205.5; DB 13; Length 108; 50.0%; Pred. No. 1.3e-16;
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                                                                                                                                                                                                                                                                                                                                                                                                                     A Al-Mahous, A. J. Trwin D. M., Graham L.C., Youson J.H.;
A Al-Mahous, A.A., Irwin D.M., Graham L.C., Youson J.H.;
A Soliceular cloning of preproinsulin cDNAs from several
osteoglossomorphs and a cyptimid.").
I Nol. Cell. Endocrinol. 17 49:11-58 (2001).
I SURCELLULAR LOCATION: SECRETED (BY SIMILARITY).
I SURCELLULAR LOCATION: SECRETED (BY SIMILARITY).
I SIMILARITY: BRIGNOS 10 THE INSULIN/IGF/RELAXIN FAMILY.
R HSSP; P01308: 1LPH.
R HSSP; P01308: 1LPH.
R PF00049: Insulin: 1.
R PROGOSSITE: PS00049: Insulin: 1.
R PROGUSSITE: PS00049: Insulin: 1.
R PROGUSSITE: PS00046; Insulin: 1.
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01-70N-2001 (TrEMBLIG). 17, Crealed)
01-70N-2001 (TrEMBLIG). 17, Last sequence update)
01-MAR-2003 (TrEMBLIG). 23, Last annotation update)
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Best Local Similarity 46.7%, Fred, No. 1.84-16.
Matches 42. Conservative 13: Mismatches 26: Indels
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6.1	
SOSPGA-SSLOPEALE 59	 AAAPGGENEVAEFAFK A.
QHCCGSHLVEALYLVCGERGFFYTPKTRREAEDLO VGGVFLGGGFGA-GSLO	 HECGSHEVERLYEVCGORGFFYNPK - REVOPEMGFEPPKAHGAAAPGGENEVA
VCGERGPPYTPKTRR	JVCGDRGFFYNPK R
PRICESHIVEALYL	QHECGSHIVUALYL
**	4

<sup>60</sup> GSLQ---KRGIVBQCCTSICSLYQLENYCN 86 :: 1.11+1.1 | .::: 1 .11 | .11 | 62 DQMEMNVRGIVEQCCHHPCNIFDLGRYCN 91

qq

S G

Search completed: September 15, 2003, 12:03:29 Job time : 35.5986 secs

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GenCoro version 5.1.6
Copyright (c) 1993 - 2003 Compudes 2.d.
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OM protein - protein search, using sw mode

September 15, 2(0), 11:44:15 | Search time #6:5256 Sections (without ablanments) 226:542 Million cell updates/sec Run on:

US-09-423-100-5

TO MENDER TOSPINOUS SE 1 FUNQHIDGSHIVFALYLVOG..... Perfect score:

BLCSUM62 Sccring table: sedneuce:

1107863 seqs. 158726573 residues Searched:

Gapop 10.0 , Sarext 0.5

Total number of hits satisfying chosen parameters:

length: 0 length: 2000000000 Minimum DB seq Maximum DB seq

Listing first 45 summaries Maximum Match 100% Post-processing: Minimum Match (%

Database

1. Sides, decided to denoised promb! AA1980.DAT.
2. Sides, decided to denoised yenesed promb! AA1980.DAT.
3. Sides, decided to decide sed yenesed promb! AA1981.DAT.
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6. Sides, decided a talgenesed yenesed promb. AA1999.DAT.
6. Sides, decided a talgenesed yenesed A\_Geneseq\_19Jur03:\*

220:::220::220:::2200:::2200:::220:::220:::220:::220:::220:::220:::220:::220:::220:::220:::2200:

/SIDST/gegeata/geneseg/genesegp-emb\_/AA2000\_DAT\_/SIDST/gegeata/geneseg/geneseg-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/geneseg7/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/genesegr/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/genesegr/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/genesegr/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/genesegr/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata/genesegr/genesegp-emb\_/AA200\_DAT\_/SIDST/gegeata//SIDST/gegea

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Ouery		í	i.	
Score	Match	Match Length DB	ž	113	
294	100.0	5.5	20	AAY42859	Human insuling prop
294	100.0	56	:: 	AAR68901	Storan of order
294	100.0		1 (	AAR78665	Procession veguesor
<b>*</b> 52	100.0	63	-	AAR68900	TO SUCH CAR DELTH
294	100.0		~	AAR68899	Eliman broth Saller
294	150.0		1,6	AAR78662	Fusion profein con
294	100.0		20	AAY42860	hearman hearth
294	100.0	116	17	AAR98897	Soft protesting hyb
294	100.0		ï	AAR71692	Matthe factor alie.

signai pept	318	17	91		75.	÷.
nsulin precursor	228	T 1	æ.;		75.	4
al peptide/l	317	17	68		75.	<b>4</b> .
-terminally e	AAR88188	17	65	93.7	275.5	42
fied pJB59	0.0	17	61		75.	, ( T
fied pub59	0.4	17	96		75.	40
fied pJB59	0.0	17	58		3.50	36
papopua pou	119	ന	SS		75.	86
cid	0.20	7.5	53		5.	2.7
nH pe	34	7.	53		75.	9.5
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Example of human i	189	12	53		7.5	**
Ins2 double-chain	799	c:	63		9	(*) (*)
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Arg	œ	ıc.	Š		۲. ۱.	О Н
Sequence of novel	AAP60132		n G		۲۰	2.5
pKV142 modified in		~	3.58		9.	GL CN
chain	AAW06810	۲-,	χ Γ.		(D)	S
Met-Arg-Met-single	AAW06809		99		ar C	35
chain	AAW06807	۲۰	63		ac ec	U . N
d pJB	AAR96050	t~	R)	94.7		2:
ed pJB59	AARS6046	r~	in S		a: C:	2.3
insulin.	AAM48219	$\sim$	S		7.8	2.2
mature ins	AAB12774	,-	ſŗ.		39	21
Human mature insui	AAB12771	$\overline{}$	27		α;	20
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rg-(B3	588		S.		ري (ي)	un 
of human	1189		52		ന	Š
lin	158		5.7		77.	.~ 
c protein	AAY42861	5.0	S	39.	Ţ.	7.
factor	69	9	146	3	Ç	
g factor al	169	15	77		S	2

## ALIGNMENTS

AA Human insulin precursor, SEQ ID AAY42859 standard; protein; 52 (first entry) .9-JAN-2000 AAY42859; RESULT 1 AAY42859

Insulin: precursor: growth hormone; chaperone: intramolecular; folging: conformation: chimeric protein; cleavable: recombinant; y:eld. W09950302-A1 Homo sapiens production; 

07-001-1999

38W0-CN00052 98WO-CN00052 31 - MAR - 1998; 31 - MAR-1998; (TONS-) TONGHUA GANTECH BIOTECHNOLOGY LTD.

3an 2;

WPI; 1999-610839/52.

New chimeric proteins containing human growth hormone fragment, used particularly for the production of human insulin  $^{-}$ 

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39 - FEB - 1995;
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AAR78665
   .î.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents a numan instilin precursor comprising insuling and B chains. This insuling precursor is a component of the chimetic proteins. And B chains follows a component of the chimetic proteins grown in AAV4286. These chimetic proteins additionally contain an Niterminal fragment of huma; growth hormone (hGH) and a cleavable of peptide linker (AAV42857). The hGH pertion of the chimetic protein acts as an intramolecular chaptering for the insuling precises.

CC enabling it to fold correctly. The cleavable peptide linker has a crimenial Arg seside which enables the hGH pertial inker has a crimenial Arg seside which enables the hGH pertial of the control of the combinant human insulin via at hGH-profisation chimetic protein confidence of recombinant human insulin via at hGH-profisation chimetic protein confidence in the folding and the folding of the fused insulin preceived insulin sequences from intracellular degradation by a microprogram; host, but also proceed the fused insuling preceived the solubility of the fused insuling preceived the solubility of the fused insuling preceived. The facilitate the solubility of the fused insuling full facility and heart sections and decreases the interactions and encoded the fused insuling the fused insuling full facility for the folding of the fused insuling full facility for the fused insuling full facility full facility full facility full facility full facility for the fused insuling full facility full fac
                                                                                                                                                                                                                                                                                                                                       the fusion proteins, thus allowing folding of the fused instill precursor at commercially useful high concentrations. The procedural steps of cyanogen bromide cleavage, oxidative suiphitotysis and related purification steps can thus be eliminated, along with the use of tigh concentrations of mercaptan or the use of hydrophotic absorper, 1981.63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FUNCHIGGSHLUPRALVENGGREGEFYTPKTRATVEGOCTSTOSLYGJANYGN 12 HTFLITTT 11 HTFLITTT 11 HTFLITTT 11 HTFLITTT 11 HTFLITTT 11 HTFLITTT 11 HTFLITTS 11 HTFLITTT 12 HVGHLGGSHLUPRALVINGGREGEFYTPKTRGTVBGOCTSTOSLYGJERNON 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of pro-insulin with correct dissulphide bridges - by ng recombinant precursor protein with mercaptan in alkali presence of chaotropic agent, then isolation on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 294: DP 20: Length 52: Pred. No. 1.60-26: 0: Indels of Mismatches 0: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pro-insulin, A-chain, B-chain: C-chain; disciphide; mercaptan; chaotropic agent.
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              Claim 12; Page 29 30; 46pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%
100.0%
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
nes 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (updated)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerl M, Ludwig J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1994-177718/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (FARH ) HOECHST AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrophobic resin
                                                                                                                                                                                                                                                                                                                                                                                                                                           52 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-NOV-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treating
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prodn.
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Provinsule is produced by treating recombinant precursor protein with a mercaptan to provide 2-10 SH residues per Cys residue, in presence of a chaotropic agent and in aq. medium of pH 10-11, treating the prou. with 3-50 q hydrophobic adsorber resin per 1 aq. medium of pH 4-7, isolating the adsorbed resin and prorinsulin and desorbing the pro-insulin. This method produces pro-insulin with correctly bonded Cys bridges. Compared with known methods it involves fewer stages (esp. no sulphitolysis or cyanogen bromide cleavage) and overall losses during purification are reduced, i.e. the process is quicker and gives better yields. Sequences of insulin chain A, B and C are given in AAR68895-97. Sequences of insulin chain A, B and C are given in AAR68899-901.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Proinsuling post-translational modifications recombinant productions protein foldings conformations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 FVNQHEGGSHEVEALYEVGGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 56
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "a peptide of 4 amino acids"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 294; DB 15;
100.0%; Pred. No. 1.7e-26;
1ive 0; Mismatches 0;
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/label= Giy-(A2-A20)-R3
/note= "human insulin A-chain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "human insulis a-chain"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             i- R1-(B2-B29)-Y
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95EP-01C1748
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-APR-1996 (first cotry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label- x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52; Conservative
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/labei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Profisulin sequence 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FARH ) HOECHSI AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 56 AA;
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involves fewer stages (esp. no sulphitolysis or cyanogen bromide cleavage) and overall losses during purification are reduced, i.e. the process is quicker and gives better yields. Sequences of insulin chain A, B and C are given in AAR68895-97. Sequences of pro-insulin 1-4 are given in AAR68898-901. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                  Pro-insulin; A-chain:
                                                                                                                                                                                                                                                                                                                                                          Human pro-insulin 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1994-177718/22.
                                                                                                                               Rest_Local Similarity
Matches 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (FARH ) HOECHST AG.
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Best Local Similarity
                                                                                             63 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-NOV-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
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02-MAR-1995
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                                                                                                                                                                                                                                                                                           AAR68899:
                                                                                             Sequence
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                                                                                                                       Juery Match
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                                                                                                                                                                                                                                                    AAR68833
    888888%%
                                                                                                                                                                                                                                                                                                                   2000 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pro-insulin is produced by treating recombinant procusor profets, which a mercaptan to provide 2.16 % Prosides per 19% rosafic. in presence of a chactropic agent and in aq. medium of pi 10-11, treating the prod. with 3.50 q hydrophobic adsarder resin per 1 ag. medium of ph 4.7. Isolating the adsorbed resin and profits in addesorbing the pro-insulin. This method produces pro-insulin aircorrectly bonded Cys bridges. Compared with known methods in
                                                                                                                                                                                                                                                                                                                1 PVNQHLGGSHLVEALYLVGGERGPFYTPKTRGIVEGOTTSLTGLYGLENYGN 52
                                                                                                                                                                                                                                                                                                                              Produced pro-insulfucith correct dissulptide oridoes by treating recombinant precursor protein with mercaptan in alkal, and in presence of chaoticpic agent, then isolation on
                                                                                                                                                                                                                                                                 Longth 56:
                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pro-insulin; A-chain; B-chain; C-chain; disulphide;
                                                                                                                                                                                                                                                              Score 294; Ob 16:
Pred. No. 1.70-26;
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                                                                                                                                                                                                                                                                                      5: Mismatches
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Example 2; Page 13; 16pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                         AAR68900 standard; peptide; 63
                                                                                                                                                                                                                                                              100.0%;
100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mercaptan; chactropic agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93EP-0118993
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Best Local Similarity 100.0
Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human pro-insulin 4.
                                                                                                                                                                                                            hydrophobic resin.
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                                                                                                                                                                                                                                     56 AA;
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02-MAR-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1994
                                                                                                                                                                                                                                     Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR68900;
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Pro-insulth is produced by treating recombinant precursor protein with a mercaptan to provide 2-10 SE residues per Cys residue, in presence of a chaotropic agent and in ag. medium of pH 10-11.

Treating the prod. with 3-50 g hydrophobic adsorber resin per I ag. medium of pH 4-7, isolating the adsorbed resin and pro-insulin and desorbing the pro-insulin. This method produces pro-insulin with confectly bonded Cys bridges. Compared with known methods it incorrectly bonded Cys bridges. Compared with known methods it incorrectly bonded Cys bridges. Compared with known methods it coleavage) and overall losses during purification are reduced, i.e. the process is quicker and gives better yields. Sequences of insulin chain A, B and C are given in AAR68898-97. Sequences of pro-insulin l4 are given in AAR68898-901.
                                                                        Gaps
                                                                                                                               1 EVNOHIGGSHIVEAGYLVCGERGFFYTPKTRGIVEOCCISICSLYQLENYCN 52
                                                                                                                                                                  FUNDHIGGSHIVEALYLVGGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prodm. of pro-insulin with correct dissulphide bridges - by treating recombinant precursor protein with mercaptan in alkali and in presence of chaotropic agent, then isolation on hydrophobic resin
                                                                    .;
0
Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 96
                                                                    indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B chain; C.chain; disulphide;
   100.0%; Score 294; DB 15; 100.0%; Pred. No. 1.9e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 294; DB 15;
Pred. No. 2.9e-26;
                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sabel W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 11: 15pp: German.
                                                                                                                                                                                                                                                                                                                                                                   AAR68899 standard: peptide: 96 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93EP-0118993.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mercaptan; chaotropic agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (updated)
(first entry)
                                                                    Conservative
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96 AA;

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Synthetic
                                                                                                                                                                             AAY42860;
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 Seglence
                       Cooky March
                                  best Loc
Matches
                                                                                                                              RESULT 7
                                                                                                                                          5.AY42360
                                                                                                                                                                             The prosent sequence is that of a fusion protein, produced in E.C...
which contains an example of a proinsulin relecule corresp.
to the general formula 32.81 (82.829 + 7 × 619 (A2.820 + 7 × 17) (1). In
commula (II), X = Lys, Arg or a perpide of 2.85 amino acids of 1.
Lys or Arg at the N-and C-termini Y = a catural amino acids of 1.
Cop or Arg at the N-and C-termini Y = a catural amino acids of 1.
Config. Arg by Arg Dys, a peptide of 2.45 amino acids of 1.
Config. Arg Lys at the N-and C-termini Ns - a natural amino acids of 1.
Config. Arg Lys at the N-and C-termini Ns - a natural amino acids of 1.
Config. Arg Cop and (B2-B29) are the insulin A- and b-chain sequences of acids (A2-A2C) and (B2-B29) are the insulin Ns - and b-chain sequences of acids of 1.
Copanger brownide is reacted with mercaptum at a ratio of 2-16 SH residues of mercaptum per Cys residue of proinsulin. The reaction acids place in the presence of a chaotropic anxillary agent a large place in the presence of a chaotropic anxillary agent a large bildges. Reaction with trypish and opt. carboxypeptidase Byselian of correctly folded insulin. The insulin is isolated by absortion on
 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolation of insilin that is correctly post-translationally processed - by reacting prolinguism with a mercaptan in the prosence of a chaotropic agent and purifice, after absorption to hydrophobic
                                                                                                                                                                                                  post-translational modification, recombinant production:
                      1 PVNQHLOGSHLVEALVLVQGERGFPYTPKTRGIVEQCOTGLOSLYQLUNYON 5/
                                    45 FVNQHLCGSHLVEALYLVCSERGFFYTPKTRGIVEQCCTSICSSLYQLENYCN 00
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/mote= "farma insulia Archain"
                                                                                                                                                                                                                                                                                                                    /label= R1-(82-529)-Y
/note= "human insulic R-chain"
                                                                                                                                                                             Fusion protein contq. proinsulin sequence 3.
 Mishatohos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Same | W.
                                                                                                                                                                                                                                                             Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Obermeier R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 2: Page d; 16pp; German.
S
                                                                                                      AAR78662 standard: protein; 96
                                                                                                                                                                                                             protein folding: conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                958P-0101749.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94DE-4405179
                                                                                                                                                                                                                                                                                                                                                       /label - X
76..96
                                                                                                                                                                                                                                                                                  /labe: = R2
                                                                                                                                                     (first entry)
 Conservative
                                                                                                                                                                                                                                                                                                /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerl M. Ludwig J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1595-284754/39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrophobic resin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FARH ) HOECHST AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-FEB-1994;
                                                                                                                                                    03-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                 EP668292-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                         23-AUG-1995
52;
                                                                                                                                                                                                                                     Synthetic.
                                                                                                                            AAR78562:
                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                          Popt:de
                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                             Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       resin
Matches
                                                                                                                                                                                                                                                             Key
                                                                               RESULT 6
                                                                                           AAR78662
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This sequence represents a chimeric protein, bGH-mini-proinsulin.
This chimeric protein contains an N-terminal fragment of human growth hors chimeric protein contains an N-terminal fragment of human growth hors cheek and a human insulin precursor comprising insuling a an intrample chapter chapter of the chimeric protein acts as an intrample chapter chapter. (MC) for the insulin precursor, as an intrample chapter chapter of (MC) for the chimeric protein acts as an intrample chapter. (MC) for the chapte peptide insuling a chimeric protein chapter of the cleavable peptide like has a chapter has a chapter of the condition of the conceaver of the chapter of the chapter of the chapter of the chapter of the conceaver of the chapter of the commercially useful figh concentrations. The procedural steps of cyanger bronide cleavage, oxidative sulphitolysis and related the conceause of chapter of the conceause of chapter of the conceause of cyanger bronide cleavage, oxidative sulphitolysis and related the conceause of cyanger or chapter or conceause the chapter of the conceause of cyanger or chapter or conceause the chapter of the conceause of cyanger bronide cleavage, oxidative sulphitolysis and related the conceause of cyanger or chapter or conceause the chapter of the conceause of cyanger or chapter or conceause or cyanger or chapter or conceause the chapter of the conceause or con
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                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New chimeric proteins containing human growth hormone fragment, used particularly for the production of human insulin {}^{\circ}
                                                                                                                                                                                    1 FVNQHLOGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSSYQLENYCN 52
                                                                                                                                                                                                                                     insulin, precursor, growth hormone; chaperone; intramolecular; folding; conformation; chimeric protein; cleavable; recombinant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 107;
         Length 95;
    Score 294; DB 16;
Pred. No. 2.9e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 294; DB 20;
Pred. No. 3.2e-25;
                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nGH-mini-proinsulin chimeric protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 13: Page 30: 46pp: English.
105.0%; St
100.0%; Pr
five 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY42860 standard; protein: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
100.0%;
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                                                Local Similarity 100.
es 52; Conservative
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      production; yield.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-MAK-1998;
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Matches

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RESCLT 8 AAR98897

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Husan insulin precursor ArgB31; diabetes; Zinc ion complex;
                                                                                                                                                                                                       Mating factor alpha 1-Insulin precursor ArgB31
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/label- mating factor alpha-1
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                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 5; Page 78; 100pp; English.
        AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR71694 standard, Protein, 145 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #65..116
/label- R-chain
117..337
  AAR71692 standard; Protein; 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label- A-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93DK-6001P44.
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                                                                                                                  (updated)
(first entry)
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nes 52; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (updated)
                                                                                                                                                                                                                                                                                         alpha 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSUB; AAQ86425
                                                                                                                                                                                                                                                                                            mating factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-SEP-1993;
62-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Andersen AS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M09507331-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                 Horro sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Markussen J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
20-NOV-1995
                                                                                                                                            20-NCV-1995
                                                                                                                     25-MAR-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98
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                                                             AAR71692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coory Match
                                                                                                                                                                                                                                                                                                                                                                                                            Key
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matiches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR71694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       comprises folding a hybrid polypeptide comprising proinsilin inder comprises folding a hybrid polypeptide comprises folding a hybrid polypeptide comprises. The insulin conditions that folded protein to enzymath oftensien and soldenware can then be purified. This sequence is a SOD insulin produced can then be purified. This sequence is a SOD insulin of the plasmid construct published. This sequence is a SOD insulin of the plasmid construct published Transformation of the property of E.coli host ceals with publish. Transformation of the property expression of the projection. The method produces recombinant numer insuling insuling production. The method produces recombinant numer insuling production. The method produces recombinant numer insuling production to calunal formone. Hazardous and cruberson. Condentical to the attual commone. Hazardous and cruberson. Expression produces involving cyanogen bromide and sulphinolysis to protect sequence are notice into the pages at available to deficiently to the native structure even with the leader attached.
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        Saps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Recombinant insulin prodm. by correctly folding pro-insulin hybrid polypeptide - then enzymatic eleavage of folded product, does not require sulphite protection of SM nor use of cyanogen bromide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11: 111: 111: 111: 1111: 1111 | 1111 | 1111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 11
                                                             1 FVNCHLCGSHJVEALYJVCGERSFFYTPKTRGIVEGOOTSTGSLYJLENYJK 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 116:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         new method for the production of recombinant luman insulin
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enzymatic cleavagos cyanogen bromides sulpolitolysis.
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Pred. No. 3.5e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U; Mismatches
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mendelovitz S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BICT-) BIO-TECHNOLOGY GENERAL CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1B; Figure 7; 69pp; English.
                                                                                                                                                                                                                                                            AAR98897 standard; Protein: 116 AA
                                                                                                                                                                                                                                                                                                                                                                                                                             SOD-proinsulin hybrid polypeptide.
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(C
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Best Local Similarity 106.0%;
Matches 52; Conservative U.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94WC-US13288.
952A-0000142.
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  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Cys unprotected.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAT34670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9620724-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-DEC-1994:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-DEC-1994;
10-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                         63 - FER - 1997
52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-JUL-1995
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Jonassen 1;

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Gaps
                                                                                                                                                                               ArgB31. Agg31 comprises the B and A chains of a claimed human insulin derivative. In the final claimed compsn. they are covalently connected via disulphide bonds between Cys residues A7/B7 and A20/R19. The derivative, which may be present as a zinc ion complex, can be used as a fast a action treatment for diabetes. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ86425 encodes AAR71692 mating factor alpha 1-Insulin precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mating factor alpha 1-Insulin precursor ArgBl, ArgB31 N-terminal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 294; DB 16; Length 137; 100.0%; Prod. No. 4.1e-26; ive 0; Mismatches 0; Indels 0
Acylated insulin deriv, which may be present as a Zinc ion complex - is used to treat diabetes and is rapid acting.
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RESULT 9

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Chery Match
EFSt.iocal Similarity TUC...
FFSt.iocal Similarity TUC...
These 52: Conservative
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                                                                                                              ..146
                                                                                                                                                                                                                                                                         NOVO ) NOVO-NORDISK AS
                                                                                                                                                                                                                                                                                                                                       WPI: 1995-131314/17.
N-PSDB; AAQ86432.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       production: yield.
How sapiers.
                                                                                                                                                                                                                                                                                                Andersen AS,
Markussen J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Home sapiers
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                                                                                                                                                     W09507931-A1
                                                                                                                                                                                                        16-SEP-1994;
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                                                                                                                                                                                                                                               32-FEB-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                        Xéy
Protein
                                                             Pept.ide
                                                                                        Peptide
                                                                                                                Pept i de
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<u>></u>,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAQ86429 encodes AAR71634 mating factor alpha 1-insulin precursor ArgB1. ArgB31 N-terminal EDAEAEAR. The insulin precursor comprises the B and A chains of a claimed fumman insulin derivative preceded by the N-terminal matro acids EEABATAR. In the innal claimed companiety are covalently connected via disulphide bonds between dys residues A7/87 and A20/R19. The derivative, which may be present as a zinc ion complex, can be used as a fast action treatment for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human insulin precursor ArgB1, ArgB31; diabetes; Zinc Lon nomp.ex:
mating factor alpha 1; N-terminal EEAEAEAER.
         Human insulin procursor AraBl, ArgB31: diabetes: Zinc ion emoplex:
mating lactor alpha i) N-terminal ESAFAEAR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FVNQHLCGSHLVEALYLVCGBRGFFYTPKTRGLVEGCGISICSLYCLENYON S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mating factor alpha 1-Insulin precursor ArgBl, ArgBl N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  thick s or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 294; 10 16; Loboth 145; 100.0%; Prod. No. 4.46-20;
                                                                                                                                                                                                                                                                                                                                                                                                                             Acylated insulin deriv. Which may be present as a Zinc ion complex - is used to treat diabetes and is rapid acting.
                                                                                                                                                                                                                                                                                                                                                     Jonassen I:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Updated on 25-MAR-2003 to correct PN fleld.)
                                                                                                   /label- mating factor alpha-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misma: ches
                                                                                                                          /label+ N-Lorminal peptide
                                                                                                                                                                                                                                                                                                                                                     Haveland S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 5: Pages 82-83; 160pp; English
                                                                        Location/Qualifiers
1..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR71695 standard; Protein; 146 AA
                                                                                                                                        94..124
/labelr_B-chain
                                                                                                                                                               125..145
/label= A-chain
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                                                                                                                                                                                                                                                           94WO-DK00347.
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94US-0190829.
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Best Local Similarity 100.
Matches 52: Conservative
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N-PSDB; AAQ86429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145 AA:
                                                                                                                                                                                                                                                                                                                                                   Andersen AS,
                                                Homo sapiens
                                                                                                                                                                                                        W09507931-A1
                                                                                                                                                                                                                                                           16-SEP-1994;
                                                                                                                                                                                                                                                                                                02-FEB-1994;
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                                                                                                                                                                                                                                                                                    17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                 Karkussen J;
                                                                                                                                                                                                                                 23-MAR-1995.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diabetes
                                                                        Key
Protei::
                                                                                                               Peptide
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Argal, Argall N-terminal EPAEARDER. The insulin precursor comprises tics and A chains of a claimed human insulin derivative preceded by the N-terminal amino acids EPAEABAER. In the final claimed compositive are covalently connected via disulphide bonds between Cys residues A7/B7 and A22/B19. The derivative, which may be present disbets:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAQ86432 encodes AAR71695 mating factor alpha 1-Insulin precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jasulin; precursor; growth hormone; chaperone; intramolecular; folding; conformation; chimeric protein; cleavable; recombinant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 294; DB 16; Length 146; 100.0%; Pred. No. 4.4e-26; tive 0; Mismatches 0; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acylated insulin deriv, which may be present as a Zinc ion complex - is used to treat diabetes and is rapid acting.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Havelund S, Jonassen i;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Updated on 25-MAR-2003 to correct PN field.)
                                                 /label- mating factor alpha l
                                                         86..94 ---- saccor alph
/labcl- Noterminal peptide
95..125
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 6; Page 85; 100pp; English.
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                                                                                                                            95..125
/label- B-chain
                                                                                                                                                                                                                   /label= A-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                          93DK-0001044.
94US-0190829.
                                                                                                                                                                                                                                                                                                                                                                                      94WO-DK00347
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/label- insulin A chain
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                                                                         89EP-0120056
                                                                                                               89DE-3927449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 98.1 cs 51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Markussen J, Fiil N,
Norris K, Voigt HO;
                                                                                                                                                                  Koller KP, Riess GJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NOVO ) NOVO-NORDISK
                                                                                                                                                                                         WPI; 1990-141149/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WFI: 1991-141828/20
                                                                                                                                         (FARH ) ROECHST AG
                                                                                                                                                                                                                                                                                                                                                                                                   57 AA;
                                                                                                                                                                                                        N-PSDB: AAC04335
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22-JJL-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3C-MAY-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-FEB-1985;
                                                                                                               19-AUG-1989:
                                                                         28-OCT 1989;
                                                                                                  3-NOV-1988;
                                                 09-MAY-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-MAY-1991
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                        EP367163-A.
                                                                                                                                                                                                                                                                                                                                                                                                   editence.
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                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
This sequence represents a chimeric protein, which contains an N-terminal fragment of human qrowth hormone (1971) of the sequence qives in AAV42856, a cleavable peptide tinker (AAV42859), and a human fishils proteins of the chimeric protein acts as an intranclemial dispersion (TMC) for the insulis precursor, ematting its of old decime (TMC) for the insulis precursor, ematting its of old decime cimperon (TMC) for the insulis precursor, ematting its older cimperon (TMC) for the chimeric protein to be removed after folding has the SQU protein can provide funner insulin via an heighprolisation chimeric protein to be removed after folding has taken place. With fewer necessary procedural stops, and here resulting its olding vield of human insulin Testings, and here resulting its olding of sequences from intracellular degradation by a fictoparams has the colling as so promote the folding of the lused insulin precursor, facilities the interactions among the fusion proteins, also shown at the fusion proteins, also successed insulin precursor at commercially useful high ordered insulin precursor at commercially useful high concontrations. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                    procedural steps of eyanogen bromide cleavage, exidative sulphinallysis and related purification steps can thus be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobic absorbent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /jabel-Lys residue linking madiin B chaim to A chaim
1.35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proinsulin analogue with a tys residue linking the A and B chains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FUNDHIGGSHIVEALYLVGGERGFPYTPKTRGIVEOCCTSICSLYGLENVCN 52
11111_1=1111=1111=1111=111=111=111=1111=1111=111=1
39 FVNOHIGGSHLVEALYLVGGERGFPYTPKTRGIVEQCCTSICSLYQLENYCN 15c
                                                                                                                                                                 New chimeric proteins containing human growth hormone fragment, particularly for the production of human mapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 294; Ub 20: Length 150: 100.0%; Pred. No. 4.5e-26:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 insulin fusion protein; pro-insulia analoque; tendamistate:
Lys-Lys bridge; ds
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                                                                                       (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label Insulin B chain 37..57
                                                                                                                                                                                                        Claim 14: Page 30-31: 46pp: English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR04582 standard; protein; 57 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0:
                                     98WO-CN00052
                                                               98WO-CN00052
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(first entry)
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                                                                                                                                          WPI; 1999 610839/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-MAR-2003
14-SEP-1990
                                     31-MAR-1998;
          07-0CT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
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                                                                                                                San 2:
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AAK04582
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comprising opt. modified tendamistate. This fusion protein ray be converted into human insulin using known methods. The synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                             This sequence is joined to the C-terminus of an N-terminal fragment
                                                                                                              New institut fusion proteins comprise pro-insulin analogue linked to tendamistate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVFQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 FVNQHLCGSHI.VFALXLVCGFRGFFYTPKTKGIVEQCCTSICSLYQLENYCN 57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 57;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 291; DB il;
Pred. No. 3.8e-26;
l; Mismatches 0;
                                                                                                                                                                                                                                                                                                                               quoc was prepared by the phosphoramidice method. See also AAG04336.
  Wallmeier H;
                                                                                                                                                                                                                                                                                                                                                                                              (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hansen MT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human insulin; diabetes: transpeptidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example of human insulin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anmerer G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR11899 standard; Protein; 52 AA.
Uhlmann E,
                                                                                                                                                                                                              Disclosure; Page ?: ?pp: German.
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98.1%;
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Search completed: September 15, 2003, 12:00:59 Job time : 37.5305 secs
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2000%8
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                                                                                                                                                                                                                                                                         Ξ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human insuling recombinant productions amorphouse memospherina, form; diabetes mellitus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence is a specific example of an insulin derivative which can be obtained in amorphous, monospherical form by dissolving in an n-propanci/Differ mixture (pH 4.5-6.5) having n-propancl content 15% relative to water. The solution is then diluted with water to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amorphous, mono-spherical form of insulin derivs. - for treating diabetes mellitus, are produced by diluting soln. in aq. isopropanol, are stable when dried or in suspension
                                                                           This human insulin procursor has correctly positioned disciplide bridges between the A and B chains and is more resistant to proteolytic digestion than prior art insulin precursors. Yeast, strains transformed with LNA encoding this precursor can be cultured to secrete it in high yields. The precursor can be converted into mature numen insulin by transpeptication. See also ARRIB97-98. (Updated on 25-MAR-2003 to correct PF Fields)
                                                                                                                                                                                                                                                                                                  1 FVNOHLGGSHLVEALYLVGGBRGFFYTPKTRGIVEQCGISTGSLYQLENYGN 52
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           Human insulia precursors - expressed with corperty positioned
dissulphide bridges giving improved resistance to procaolysize
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                                                                                                                                                                                                                                              Length 52:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Escherichia coli)
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                                                                                                                                                                                                                                          Score 287; 38 12;
Pred, No. 9.8e-26;
2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (produced recombinantly in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33..53
/label- insulic_A chain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= insulin_B-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qual::iers
                                                                                                                                                                                                                                                                                                                                                                                             AAR65883 standard; protein; 53 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sxample 2: Page 5: 10pp; German.
                                                    Claim 3: page 18: 28pp; English.
                                                                                                                                                                                                                                              97.6%:
95.2%:
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(iirst eniry)
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Best Local Similarity
Matches 50: Conserv
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26-JUN-1995
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                                                                                                                                                                                                                    Sequence
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reduce a propagol content to below 15%. The resulting insultn preparation is stable and can be used for the treatment of diabetes rellitus.
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                                                                                                                        DB 15; Length 53:
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                                                                                                                          Score 283.5; DB 15;
Pred. No. 2.5e-25;
0; Mismatches 0;
                                                     (Updated on 25-MAR-2003 to correct PN field.)
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Rest Local Similarity 98.1%;
Matches 52; Conservative
                                                                                          S.S. AA;
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GenCore version 5.1.6 copyright (c) 1993 - 2003 Compuget Ltd.
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- protein search, using swinger

OM protein

September 15, 2303, 21.57:40 ; Search time 11.9243 Seconds (without alignments)
184.449 Million cell qudares/sec Run on:

US-09-423-100-5 294 1 FVNQHLGGSHLVBALXLVGG......lVHQCGTSTGSLYJLENYCH 5× Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 / Gapext 0.5 Scoring table:

328717 seqs, 42310858 residues Searched:

428313 Total number of hits satistying chosen parameters:

Minimum DB seq Length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 1898 Maximum Match 1898 Listing first 45 summaries

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

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Result No.	Score	Query Match	Match Length DB	93	D.	Description
, , <u>, , , , , , , , , , , , , , , , , </u>	294	100.0	- 56	<u>.</u> -	US-08-160-376A-7	Sequence 7, Appli-
2	294	100.0	56	-	US-03-389-487-:1	Sequence 11. Appl
<b>.</b> ~1	294	100.0	63	-	US-08-160-376A-6	ç
4	294	100.0	99	-	US-08-291-0668-5	S
ស	294	100.0	96	٦	US-08-160-376A-5	Sequence 5, Appli
G	294	100.0	96	٦	US-58-389-487-8	ж Ж
۲	294	100.0	137	7	US-08-400-256-39	Sequence 39, Apr.
ഡ	294	100.0	137	٣	US-08-975-365-39	163
5	294	130.0	145	-	US-08-400-256-45	45,
10	294	150.0	145	٣	118-08-975-365-45	77
1	294	150.0	146		US-38-403-256-48	X.
12	294	100.0	146	~	US-08-975-365-48	χ 
13	291	99.0	5.7	_	US-08-030-7338-44	 
14	283.5		S	_	08-08-243-417-4	<del>,</del>
15	283.5		Б	٠,	US-08-981-9888-42	4.2
16	278.5		, ، ک	77	US-09-477-524-3	ď
17	278.5	54.7	ç <b>≓</b>	-,-	08-09-723-981-3	
18	278.5			••	05-09-723-896-3	
19	277.5	4.46	53	_	US-08-233-617·3	Sequence 1. Apr 11
20	277		e S	m	US-08:900-574-3	
21	276.5	0.46	ເດ	<b>~</b> 1	US-38-900-574-6	ی
22	276.5	94.0	99	m	05-08-900-574-5	Sequence 5. Appli
23	276.5	0.46	6,7	٠,	0S-08-981-988A-1	Scanegoo : Arrii
24	276.5	0.46	67	٦,	JS-08-981-986A:5	Sequeror 5, Aprli
25	276	93.9	67	~	US-08-900-574-7	r:
26	275.5	43.7	es. LC	٣.	US-09-241-853-2	e i
27	275.5	63.7	65	_	US 08-468-6745-71	Ē

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Obery Match Best Local Similarity 100.0%; Pred, No. 4.9e-29; Matches 52; Conservative 0; Mismatches 0; Indels

Sequence 11, Appl Sequence 41, Appl Sequence 45, Appl Sequence 15, Appl Sequence 15, Appl Sequence 37, Appl Sequence 37, Appl Sequence 36, Appl Sequence 36, Appl Sequence 42, Appl Sequence 43, Appl Sequence 44, Appl Sequence 44, Appli Sequence 44, Appli		
28 275.5 93.7 65 1 US-08-780-571-71 29 275.5 93.7 89 1 US-08-468-6748-41 30 275.5 93.7 91 US-08-468-6748-41 31 275.5 93.7 91 US-08-70-256-15 32 275.5 93.7 104 1 US-08-70-256-15 34 275.5 93.7 104 1 US-08-70-256-15 36 275.5 93.7 117 3 US-08-70-256-15 36 275.5 93.7 117 3 US-08-70-256-15 37 275.5 93.7 117 3 US-08-712-669F-37 38 275.5 93.7 124 1 US-08-400-256-33 40 275.5 93.7 140 1 US-08-400-256-42 41 275.5 93.7 140 3 US-08-275-365-42 42 275.5 93.7 140 3 US-08-975-365-42 43 275.5 93.7 140 3 US-08-975-365-42 44 275.5 93.7 140 3 US-08-975-365-42 45 275.5 93.7 140 3 US-08-975-365-42 46 275.5 93.7 140 3 US-08-975-365-42 47 275.5 93.7 140 3 US-08-975-365-42 48 275.5 93.7 140 3 US-08-975-365-42 49 275.5 93.7 140 3 US-08-975-365-42 41 275.5 93.7 140 3 US-08-975-365-42 42 275.5 92.7 140 3 US-08-975-365-42 43 275.5 93.7 140 3 US-08-975-365-42 44 US-08-975-365-42 45 275.5 92.7 140 3 US-08-975-365-42 46 US-08-971-988A-4	ALIGNMENTS	PESCH: 1 1'S-08-160-374-7 Squarce 7. Application US/Otl50376A Patent No. 18473049 GENERAL INFORMATION: APPLICANT: Obermeier, Ranier APPLICANT: Obermeier, Ranier APPLICANT: Gerl, Maitin APPLICANT: Gabe, Walter APPLICANT: Sabe, Walter APPLICANT: Buy 386 Maides CURRESPONDENCE BOURES: ADBRESSE: Kemmeth A. Genoni, Esq. CUNTRY: OB. S.A. ADBRESSE: Kemmeth A. Genoni, Esq. CUNTRY: OB. S.A. ADBRESSE: Kemmeth A. Genoni, Esq. COUNTRY: OB. SABE COMPUTER: New Jersey COUNTRY: OB 37 ERM: WINDOWS 3.1 SOFTWARE: WORDERFECT 5.1 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/O8/160,376A PILING DATE: December 2, 1992 ATTORNEY AGENT: WALTER, ESq. REGISTRATION NUMBER: GEP 4240420.7 FILING DATE: December 2, 1992 ATTORNEY AGENT: WALTER, ESq. REFERNATION NUMBER: GEP 4240420.7 FILING DATE: DECEMBER: HOB 92/F 384 REFERNATION NUMBER: HOB 92/F 384 REFERNATI

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1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSLCSLYQLENYCN 52
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APPLICANT: Dorschig, Michael
APPLICANT: Coller, Klaus-Peter
APPLICANT: Marquard, Richaer
APPLICANT: Marquard, Richaer
APPLICANT: Moiwes, Johannes
TITLE OF INVENTION: An Enzymatic Process for the
TITLE OF INVENTION: Conversion of Preproinsulins Into Insulins
NUMBER OF SEQUENCES: 5
COFFEESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 294; DB 1; Length 63; 100.0%; Pred. No. 5.6e-29; tive 0; Mismatches C; indels
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                                                                                                                                                                                                                                                                                COMPUTER READANIE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MD STORAGE
    APPRESSEE: Kenneth A. Genoni, Esq.
STREET: Rt. 202-206 No. 5473649±h/P.O. Box 2500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Barbara V. Maurer, Esq.
REGISTRATION NUMBER: 31.287
REFERENCE/DOCKET NUMBER: HOE 92/F 384
TELECOMBUNICATION INFORMATION:
TELEPHONE: (908) 231-4079
                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM 386
OPERATING SYSTEM:
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DAIA:
APPLICATION NUMBER: US/08/160,376A
FILING DAIE: December 1, 1993
CLASSIFICATION: 530
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APPLICATION NUMBER: US/08/291,060B
FILING DAIE: G8-AGS-1994
CLASSIFICATION: 435
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIBLE
CPERATING SYSTEM: PC-POS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/08291060B Fatent No. 5728543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PATCR APPLICATION DATA:
APPLICATION NUBBE: GE P 42404
FILING DATE: December 2, 1992
ATTCRNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (908) 231-4079
TELEFAX: (906) 231-2255
INPORMATION FOR SEC ID NO: 6: SEGJENCE CHARACTERISTICS:
LENGIH: 63 Amino Acids
TYPE: Amino Acid (AA)
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NAME: Einaudi, Carol P.
REGISTRATION NUMBER: 32,220
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20005-3315
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                                                                                               CITY: SON
STATE: NE
COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Obermeler, Rainer
APPLICANT: Ober, Martin
APPLICANT: Ober, Martin
APPLICANT: Sabel, Walter
APPLICANT: Sabel, Walter
TITLE OF INVENTION: Process for Obtaining Instiln Having
TITLE OF INVENTION: Correctly Linked Cystine Bridges
NUMBER OF SEQUENCES: 12
ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             indels:
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TITLE OF INVENTION: Possessing Correctly Linked
TITLE OF INVENTION: Cystine Bridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Finnegan, Henderson, Farabow, Garrett & ADDRESSEE: Dunner
STREET: 1800 I Street, N.W.
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PARCOLLN Release #1.0, Version #1.25
CURRUT APPLICATION DATA:
APPLICATION NUMBER: US/08/389,487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT IMPORMATION:
NAME: Elbaudi, Carol P.
REG.STRATION NUMBER: 32,220
REFERENCE/DOCKET NUMBER: 02481.1424-00000
TELECOMMUN.CATION INFORMATION:
TELEFRAN: 202-408-4400
INFORMATION FOR SEC ID NO: 11:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D.C. United States of America
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                                                                                                                                                                                                                                                                                                                           Sequence 11, Application US/38389447 Patent No. 5663291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Chermeiti, Runier
APPLICANT: Geri, Martin
APPLICANT: Ludwig, Jurgen
APPLICANT: Sabei, Walter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56 amine acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lincar
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                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Oberme
APPLICANT: Gerl, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20005-3315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
US-08-160-375A-6
                                                                                                                                                                                                                                     RESULF 2
US-08-389-487-11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
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TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ANDERSS:
ANDERSSEE: No. 57504970 No. 5750497disk of No. 5750497th America, Inc.
STREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FVNQHLCGSHJVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGTVEOCCTSICSLYQLENYCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cuery Match 100.0%; Score 294; DB 1; Length 96; Best Local Similarity 100.0%; Pred. No. 8.8e-29; Matches 52; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Process for Obtaining Insulin Having TITLE OF INVENTION: Correctly Linked Cystine Bridges NUMBER OF SEQUENCES: 12 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Finnegan, Henderson, Farabow, Garrett.
ADDRESSEE: Dunner
STREET: 1300 I Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
DEERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patenth Pelease #1.0, Version #1.25
GURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/389.487
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Einaudi, Caro! P.
RESISRRAITON NUMBER: 32,220
RESPERENCE/COCKEI NUMBER: 02481.1424-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: 232-408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AESULT 7
US-00-400-256-39
Sequence 39, Application US/08400256
Fatent No. 575549
Fatent No. 575549
FAPELICANT: Havelund, Svend
APPLICANT: Havelund, John
APPLICANT: Gaistrom, John
APPLICANT: Jonasson, Ib
APPLICANT: Andersen, Jan
APPLICANT: Markussen, Jan
APPLICANT: Markussen, Jan
APPLICANT: Markussen, Jan
APPLICANT: Markussen, Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       United States of America
                                                                                                                                        Sequence 8, Application US/08389487
Patent No. 5563291
                                                                                                                                                                                                               APPLICANT: Obermeler, Rainer APPLICANT: Gerl, Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                         APPLICANT: Ludwig, Jurgen
APPLICANT: Sabel, Walter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS: LENGTH: 96 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEC ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202-408-4400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Dunner STREET: 1300 I Street Street Street Street Street STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inear
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ZIP: 20005-3315
                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NOLECULE TYPE:
US-08-389-487-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM IYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                     US-08-389-487-8
                                                                                                                                                                   Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                    1 FVNGHLOGSHLVEALYLVGGERGFFYTPKTRG1VFQCCTSICSLYGLENYOK 52
                                                                                                                                                                                                                                                                                                                                                                                                                            15 FVNQHLCGSHLVEALYLVCGBRGFFYTPKTRGIVEGGTSTGSLYGDENYTN 66
                                                                                                                                                                                                                                                                                                          100.0%; Score 294; UB 1; Length 64; 100.0%; Pred, No. 5.96-29;
                                                                                                                                                                                                                                                                                                                                                        Todels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Germanier, Kanier
APPLICANT: Gerl, Martin
APPLICANT: Gerl, Martin
APPLICANT: Gerl, Martin
APPLICANT: Gerl, Martin
APPLICANT: Ludwig, Jungen
APPLICANT: Sabel, Walter
TITLE OF INVENTION: Possessing Correctly Linked
TITLE OF INVENTION: Cystine Sridges
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Mcnoeuh A. Gandi, Esq.
STREE: Mt. 202-206 No. 5473649th/P.O. Box 2503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Process for Obtaining Proissuils
Possessing Correctly Linked
Cystine Sridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 08876-1259
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETIE, 3.5 INCH, 1.44 MF STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ċ
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REFERENCE/DOCKET NUMBER: 02481.1105-02000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                      0; Mismaiches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 530
PROR APPLICATION DATA:
PREDE APPLICATION DATA:
PRICING DATE: DECEMBER: GE P 4240420.7
FILING DATE: DECEMBER: 2, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Barbara V. Maner. Bsq.
REGISTRATION NUMBER: 31,287
REFERENCE/DOCKET NUMBER: 31,287
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/169,376A FILING DATE: December 1, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5. Application US/OBi60376A Patent No. 5473049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WINDOWS 3.1
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                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4366
TELEFAX: (202) 408-4400
INFORMATION FOR SEQ 1D NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (908) 231-4079
TELEFAX: (908) 231-2255
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: WINDOWS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Bost Local Similarity 106.(
Matches 52; Conservative
                                                                                                                                        LENGTH: 66 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96 Amico Acids
                                                                                                                                                                                                                                                                                                                             Similarity 100.
52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGIH: 96 Amino Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amino Acid (AA)
                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Somerville
STATE: New Jersey
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1BM 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-160-376A-5
                                                                                                                                                                                                                                                           US-08-291-0608-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-C8-150-475A-5
                                                                                                                                                                                                                                                                                                       Query Match
Best Local S:
Matches 52;
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1 FVNQHLCGSHLVEA:YLVCGERGFFYIPKTRG1VEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                            100.0%; Score 294; DB 3;
100.0%; Pred. No. 1.3e-28;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Havelund, swend
APPLICANT: Halstrom, John
APPLICANT: Johnssen, 1b
APPLICANT: Madersen, Asser Sloth
APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 45
CORRESONDENCES: 45
CORRESONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Lambiris, Flias 3.
REGISTRATION NUMBER: 53,728
REFERENCE/DOCKET NUMBER: 3985,226-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM :
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 45, Application US/08400256 Patent No. 5750497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION TELEPHONE: 212-867-6123
                                                              INFORMATION FOR SEQ ID NOT 39: 89: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 145 amino acids
                                                                                                                               : 137 amino acids
amino acid
212-667-0123
212-878-9655
                                                                                                                                                                                                                                                                                                  Owery Match
Best Local Similarity 100.0
writhins 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Obery Match
Best Local Similarity 100.
Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COLECULE TYPE: protein
                                                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: United
ZIP: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ES-08-400-256-45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-400-256-45
                                                                                                                                                               TYPE: am ICPOLOGY:
                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
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New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 294; DB 1; Length 137; 100.0%; Pred. No. 1.3e-28; tive 0: Mismatches 0; Indels
                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: 118 PC compatible
FILING DATE: 03 MAR 1995
CLASSIFICATION: NUMBER: 05.06/460.255
FILING DATE: 03 MAR 1995
CLASSIFICATION: 118 PC compatible
RECISTRATION: 118 PC compatible
RECISTRATION NUMBER: 33,728
RECISTRATION NUMBER: 33,728
RECISTRATION NUMBER: 38,78
RECISTRATION NUMBER: 36,70123
TELECHONE: 212-867-0123
TELECHONE: 212-867-0123
SOURCE CHARACTELITIS:
COMPUTER: 118 PC compatible
COMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DGS
SOFTMARE: Patentin Release #1.0, Version #1.25
CURRENI APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3985.220-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Jonasson, 15
APPLICANT: Andersen, Asser Stoth
APPLICANT: Markinssen, Jan
TITLE OST INVENTION: ACCLLATED INSULIN
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NJMBER: US 5)/400.256
FILING DATE: 03.MAR-1995
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 08/03/975,369
FILING DATE:
                                   : New York
RY: United States of America
10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-975-365-39; Sequence 39, Application US/08975365; Patent No. 6011607
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Halstrom, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 137 amino acids
amino acid
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Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPCLOGY: linear
MOLECULE TYPE: protein
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                                                                                                                               COMPUTER READABLE FORM:
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      New York
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STREET: 40
                                STATE: Ne
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94 FVNQHLCGS::LVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 145
66 FVNQHIGGSHLVEALYTAVGGERGFFYTPKIRGIVEQCCTSICSLYQLENYCN 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FVNQHICGSHI/VEALYI/VCGERGFFYTPKIRGIVEQCCTSICSLYQLENYCN 52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/400,256
FILING DATE: 03-MAR-1995
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 294; DB 1; 100.0%; Pred. No. 1.4e-28;
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us-09-423-100-5.rai

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Indels
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SIATE: New York
COUNTRY: DUILED States of America
ZIP: 16174-6401
COMPUTER READARIE FORM:
MEDIUM TYPE: Ficppy disk
COMPUTER: 1BM PC compatible
COMPUTER: 1B
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: SYSTEM: PC-DOS/MS-TOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/OS/400,256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 100.0%; Score 294; DB 1; Local Similarity 100.0%; Pred. No. 1.4e-28; Res. 52; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                          ATTORNEY AGENT INFORMATION:
NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
REPERSICE/LOCKET NUMBER: 3965.220-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEPRAX: 212-878-9655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3985.220-US
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APPLICANY: Haistroom, John
APPLICANY: Johnssen, John
APPLICANY: Andersen, Asser Sloth
APPLICANY: Markussen, Jan
TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05 08/400,256
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Fatent No. 6011007
GENERAL INFORMATION:
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REFERENCE/DOCKET NUMBER: 396
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEC ID NO: 48:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION BATA:
APPLICATION NUMBER: US 08 08 FILING DATE: 03-MAR-1995 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                 03-MAR-1995
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TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
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REGISTRATION NUMBER: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 146 amine acids
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amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
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CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
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                                                                                                                                                                                                    FILING DATE: 03 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-04-975-365-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGIH:
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405 Eckington Avenue, 54th Floor
                                                                                                                                                                                                                                                                                                                                                                 ADDRESSE: No. 6011007c No. 6011007disk of No. 601160711, America. Inc.
STREET: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 294: DH 3: Langth 145: 100.0%; Pred. No. 1.46-28; tive 0; Mismatches 0; Inde.s (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP. 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC COMPUTED:
OPERATION SYSTEM: PC-PD/S/MS-FOS
SOFTWARE: Patiently Release #1.0. Version #1.25
CURRENT APPLICATION SATA:
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APPLICANT: Hals.rom, John
APPLICANT: Johnston, John
APPLICANT: Johnston, John
APPLICANT: Anderson, Jan
APPLICANT: Markusson, Jan
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                             TITUE OF INVENTION: ACTLATED INSULIN NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
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10174-6401
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: United States of America
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FILING DATE:
CLASSIFICATION: 5:4
PRIOR AFFLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NIMBER: US 08/400,256
FILING DATE: 03-MAR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                    Andersen, Asser Sloth
Markussen, Jac
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          Sequence 45, Application US/08975365
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Lambir's, Elias J. REGISTRATION NUMBER: 33.7 REFERENCE/DOCKET NUMBER:
                                                                                                       Havelund, Svend
Halstrom, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : 212-867-0123
212-878-9655
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amino acid
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INFORMATION FOR SEC ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                          Jonassen,
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Best Local Similarity
Matches 52; Conserv
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                                        Patent No. 6011007
GENERAL INFORMATION:
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                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                        APPLICANT:
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                                                                                                          APPLICANT
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60110070 No. 6011007disk of No. 6011607tl. America, Inc.
                                                                                                                                                     95 FVNQHILGSSHLVBALKJVGSERGFFYTPKTRGIVEGGGCTSICS:XOLENYCN 146
                                                                                                                          1 FVNQHLGGSHLVEALYLVGGERGFFYTPKTRGIVEGCCTSICSLYQLENYCN 52
Length 146;
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Gaps
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                                                                                                                                                                                                                                                                                       1 FVNORLCGSHIVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                            6 FVNQHLGGSHEVEALYLVCGERGEFTTPKTKGIVEGCCTSIGSLYQLENYCN 57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Gelsen, Karl
TITLE OF INVENTION: Amorphous Monospherical Forms of Insulin
TITLE OF INVENTION: Derivatives
CORRESPONDENCE: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jength 53;
                                                                                                                                                                                                 99.0%; Score 291; DB 1; Length 57; 98.1%; Pred, No. 1.2e-28;
Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96.4%; Score 283.5; DB 1; Length 598.1%; Pred. No. 8.8e-28;
Live C: Mismatches O; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Finnegan, Henderson, Farabow, Garrett s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: Batenin: PC-505/MS-DOS
SOFTWARE: Patenin: Release #1.5, Version #1.25
SURVENT APPLICATION DATA:
APPLICATION NUMBER: US/08/233,617
FILING DATE: 25-APR-1994
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 02481.1374-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-406-4500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIREST: 1300 I Street, N.W., Suite 700 CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA
APPLICATION NUMBER: P 43 i3 762.4
FILING DATE: 27 APR-1933
ATIONNEY/AGENT INFORMATION:
NAME: CAYOL P. EIDBUILD
REGISTRATION NUMBER: 32,220
                                                                                                                                                                                                                                                                                                                                                                                              BESULT 14
CS-38-233-617-4
Sequence 4. Application US/08233617
Patent No. 546666
GENERAL INFORMATION:
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Sabel, Walter
Deil, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Escherichia coli
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGIH: 53 amino acids
TYPE: amino acid
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                INPORMATION FOR SEQ ID NOT SEQUENCE CHARACTERISTICS: LENGTH: 57 aming actids
                                                              : 57 amino acids
amino acid
                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MCLECULE TYPE: protein ORIGINAL SOURCE:
                                                                                                                                . MOLECULE IMPE: peptide US-08-030-731A-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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Sest Local Similarity
Timbos 51; Conserva
                                                                                                             unknown
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ZIP: 20005-3315
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                                                                                                             TOPOLOGY:
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                                                                                                                                                                                               Sequence 44, Application US/CF030731A
Patent No. 5426036
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Riess, Guenther Johannes
APPLICANT: Willmain, Eugen
APPLICANT: Willmain, Eugen
APPLICANT: Willmain, Eugen
TITLE OF INVENTION: Processes for the Preparation of Foreign
TITLE OF INVENTION: Proteins in Streptomyretes
NUMBER OF SEQUENCES: 48
CORRESPONDENCE ADDRESS:
                                                                                                        Obery Match
Best Local Similarity 100.0% Pred. No. 1.44-28,
Matches 52: Conservative 0, Mismatches 0, Indels
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MEDDIN TYPE: 510099 315
COMPUTER REACABLE FORM:
MEDDIN TYPE: Floppy 3154
COMPUTER: 18M PC COMPATIBLE
COMPOTER: 18M PC COMPATIBLE
COMPUTER: 18M PC COMPATIBLE
CORRENT MOREN: PC-DOS/MS-DCS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT MOREN: 05/06/030,731A
FLING DATE: 12-MR-1993
CLASSIFICATION: 435
PRIOR APPLICATION: DATA:
APPLICATION NUMBER: 35 07/185,840
FILING DATE: 03-MAY-1988
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Finnegan, Henderson, Farabow, Garrett.
ADDRESSEE: Dunner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Kirschor Michael K
REGISTRATION NUMBER: 34,351
REPRENCE/DOCKET NUMBER: 02481-0593-02000
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07/735,757
FILING DATE: 26-73L-1991
PRICE APPLICATION DATE:
APPLICATION NUMBER: DE F 37 :4 866.4
FILING DATE: 05-MAY-1987
APPLICATION NUMBER: DE F 7 :4 866.4
FILING DATE: 03-MAY-1987
FILING DATE: 03-MOY-1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3: Dunner
1300 T Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DE P 39 27 449.7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 677410,622 FILING DATE: 01-NOV-1969 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:

APPLICATION NUMBER: DE P 40 12

FILING DATE: 2: ADE-1990

ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE PFILING DATE: 19-AUG-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202-408-4000
           MOLECULE TYPE: protein US-08-975-365-48
amino anid
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                                                                                                                                                                                                                                                                                                                               US-06-030-731A-44
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STATE:
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1 FVNQHLCGSHLYEALYLYCGERGFFYTPKTRRGIVHWCCTSICSLYQLENYCN 53
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Sequence 42, Application US/28981988A

Parent No. 6347194

Parent No. 6347194

APPLICANT: Vittal Mallya Scientific Research Foundation APPLICANT: Vittal Mallya Scientific Research Foundation TITLE OF INVENTION: Insulin NUMBER OF SEQUENCES: 4 CORRESPONDENCE ADDRESS: APETT R. R. ROAD

CITTL SANADIORE

COUNTRY: ANADAGE FORM: STREET: K. R. ROAD

CITT: ARANACHER FORM: PC-DS/MS-D38

COUNTRY: ANADAGE FORM: PC-DS/MS-D38

COMPUTER: IBM PC compatible

COMPUTER: STREET: CATION NUMBER: US/08/381.969A

FILING DATE: 28:101-19-5

INFORMATION: ASSURED: CATION NUMBER: GB 9818967.]

FILING DATE: 28:201-19-5

INFORMATION: ASSURED: CATION CATE: SA 2011-19-5

LENGTH: 53 amino acids

TTPER: AMINO acids

STREET: CATEMORED: 
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Best Local Similarity 98.1%; Pred. No. 8.86-28;
Matches 52; Conservative 0; Mismatches 0; Indexs
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US-08-981-988A-42
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Search completed: September 15, 2003, 12:05:32 Job time : 11.9284 secs

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September 15, 2003, 12:03:35 / Search time 21:8065 Seconds (without alignments) 347:945 Million cell updates/sec
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/cqn2_6/ptcdata/1/pubpaa/US06_NFW_PUB.pep.*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compuden 11d.
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                                                                                                                                                                                                                                                                                                                                                                                                                               541936 seqs, 145912426 residues
                                                                                                                                                                                                                                                                                                     1 FVNQHLCGSHLVFALYLVCG.....
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Maximum Match 100*
Listing first 45 summaries
                                                                                                    OM protein - protein search, using sw model
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Gapop 16.0 / Gapext 0.5
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Maximum DB seq length: 20000000
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294
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                        Scoring table:
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                                                                                                                                                      Run on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Descr:ption	Sequence 5, Appli	Sequence 6. Appli	Sequence 7, Appli	en.	Sequence 1, Appli	œ	Sequence 19, Appl	Sequence 5, Appli	Sequence 1, Appli	Sequence 4, Appli	Sequence Z, Appli	Sequence 4. Appli	Sections 4, And 1	<i>y</i> .	Sequence 3. Appli
ع:	US-10-054-873-5	US-10-054-873-6	US-10-054-873-7	US-09-858-935B-S	JS-10-028-410-3	US-09-894-711-18	US-09-861-687-19	US-10-066-009A-3	US-09-878-380-1	US-09-858-9358-4	08-10-028-410-2	US-10-054-873-4	US-09-947-563-4	US 09-205-558-125	US-09-815-229-3
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Score	294	294	294	278.5	278.5	275.5	275.5	273	267	267	267	267	267	267	267
Result No.	1	73	٣	4	Ŋ	9	7	œ	6	10	11	12	13	14	15

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US-09-804-4C9A-9 US-09-969-748C-6 US-10-328-813-2 US-09-280-030-63 US-09-280-030-62 US-09-280-030-62 US-09-740-359-12 US-09-740-359-12 US-09-740-359-12 US-09-770-359-10 US-09-770-359-10 US-09-770-11-5 US-09-776-611-6 US-09-776-611-6 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-711-5 US-09-97-756-89-133-05-05-91-134 US-09-205-658-135-05-05-135-05-05-135-05-05-133-05-05-133-05-05-133-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-133-05-05-05-05-133-05-05-05-05-05-133-05-05-05-05-133-05-05-05-05-05-05-05-05-05-05-05-05-05-	9-813-229 09-947-56 9-815-229 9-925-297
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Best Local Similarity 100.09
Matches 52: Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
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CS 09-858-9358-5
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                          1 PVNQHLCSSHLVEALYLVCGERGFFYTPKTRGIVEDOTTSTGSLVGLENYCK 52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, Application CS/10/54873
Publication No. US20020/64712/1
GENERAL INFORMATION:
APPLICANT: CAN 2 Zhong Bu
TITLE OF INVENTION: Chimeric Protein Containing an
                                                                                                                                                                                                                                                                                                                                       ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.3%; Score 296; IP 14; Lenath 1/7; 100.3%; Pred, No. 5.5e-29; Cive 0; Mismatches 0; indels 0
                                                                                                                                                                                                                                                      Details 12,
                                                                                                                                                                                                                                                                                                                                  State;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentir Release #1.0, Version #1.30
CURRENT APELICATION DATA:
APPLICATION NUMBER: US/10/054,873
FILING DATE: 22-Jen-2002
CLASSIPICATION: <CRNOWG>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crow Lip
SIRET: Two Embarcadero Center, Eighth Floor
CITY: San Prancisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Mycroft, Frack J
REGISTRATION NUMBER: 46.946
REFERENCE/DOCKET NUMBER: 020167-500130US
INFORMATION FOR SEQ 15 NO: 6:
SEQUENCE CHARACIERISTICS:
                                                                                                                                                                                                                                             Query Match 100.0%; Score 294; DB 11; Best Local Similarity 100.0%; Pred. Mr. 2.56-27; Matches 52; Conservative 6; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: WO PCT/CN96/30052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PILING DATE: 31 WAR-1998
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: ISM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                               MCLECOLE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 5:
US-10-054-873-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE DESCRIPTION: REQ 1D NO: 6: 0S-10-054-873-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application US/10054873; Publication No. US/20020164712A; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 107 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: <Unknown>
SIRANDEDNESS: "Taknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Onery Match
Bost Local Similarity 100..
Thos 52, Conservative
                                              TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 94111-3834
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Gaps
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APPLICANI: GREE, Zhong Ku
TITLE OF INVENTION: Chimeric Protein Containing an
Intramolecular Chaperone-Like Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 278.5; DB 11; Length 51;
Pred. No. 2e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Dubaquie, Yves
APPLICANT: Dubaquie, Yves
APPLICANT: Lowen HELD, Blien
TITTL OF INVENTION: METHOD FOR IREATING CARTILAGE DISCRIBES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MADDING ATTER: Floppy disk
COMPUTER: Floppy disk
COMPUTER: TBM PC compatible
OPERATION SYSTEM: PC-POS/MS-UOS
SOFTWARE: PatchIn Release #1.0, Version #1.30
                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSER: Townsend and Crew LLP
SIREET: Two Embarcaderc Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Mycroft, Frank J
REGISTRATION NUMBER: 45,946
REFFRENCE/DOCKET NUMBER: 020167-000130US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 294; DB 14;
100.0%; Pred. No. 7.9e-29;
1ve 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/10/054,873
FILING DATE: 22-Jan-2002
CLASSIFICATION. UDKNOWN>
PRICK APPLICATION DATA:
APPLICATION DATA:
FILING DATE: 31-MAR-1998
APPLICATION NUMBER: WO PCT/CN98/00052
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
ATTORNEY/AGENT INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/056,935B
CURRENT PILING DATE: 2602-07-02
PRICE APPLICATION NUMBER: US 60/248,985
PRICE FILING DATE: 2000-11-15
PRICE APPLICATION NUMBER: US 60/204,490
PRICE FILING DATE: 2000-05-16
NUMBER OF SEQ ID NOS: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE IYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 150 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS:
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ADDRESSE: No. US20020193292alo No. US20020193292aidisk of No. US20
STREWI: 405 Lexington Avenue, 64th Floor
CITY: New York
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                                             72 FVNQHLCGSHLVEALYLVCGERGFFYTFKAAKGIVEQCCTSICSLYQLENYCN 124
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Pred. No. 1.4e-26;
1; Mismatches 1; Indels 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READMALE FORM:
MEDIUM TYPE: F.copy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-LOS/MS-DOS
SOFTWARS: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 4341.204-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: INSULIN DERIVATIVES NUMBER OF SEQUENCES: 26 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/10066009A
Publication No. US20020165155A1
GENERAL INFORMATION:
APPLICANT: Schaffer, Michelle
APFLICANT: Ulsch, Mark
APPLICANT: Ulsch, Mark
APPLICANT: Vajdos, Felix
ITTLE OF INVENTION: CRYSTALLIZATION OF IGF-1
FILE REFERENCE: P1669R1
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COUNTRY: United States of America
21P: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/861.687
FILLING DATE: 21. May-2001
CLASSIPICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brandt, Jakob
Kurtzhals, Peter
Hanson, Hertz Per
Kaarsholm, Niels Christian
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SEQUENCE DESCRIPTION: SEQ ID NO: 19:
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NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-0123
TELEFAX: 212-878-9655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 16-DEC-1997
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IS-09-861-687-19

| Sequence 19, Application US/09861687

| Publication No. US20020193292A1
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TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                               Havelund, Svend
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Markussen, Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93.78;
94.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 19
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                          Jonassen, Ib
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Matches 50; Conservative
                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-09-861-687-19
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US-10-056-009A-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
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Patent No. US202013714441

GENERAL INCRMATION:

APPLICANT: Cadvigsen, Thomas Borgium:

TITLE OF INVENTION: Method for making insult; precursors and corners having improved insultion:

TITLE OF INVENTION: Method in yeast

FILE REFERENCE: 6143,400-05

CURRENT FILING DATE: 2000-13-17

PRIOR FILING DATE: 2000-03-17

PRIOR PILING DATE: 2000-03-17

PRIOR PILING DATE: 2000-02-10

PRIOR PILING DATE: 2000-02-10

PRIOR FILING DATE: 2000-02-10

PRIOR FILING DATE: 2000-12-19

PRIOR FILING DATE: 2000-12-19

NUMBER OF SEQ ID NOS: 20

SOFTHARE: FastSEC for Windows Version 4.0
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                                                                       1 FVNQHLCGSHLVBALYLVCGERGFFYIPKTRGIVEQCCTSLCSLYQIENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | FEFTH | FEFT
                                                                                                            1 FVNOHIGGSHLVEALY CYGERGFFY TPKT - GLVENCCTSICSLYQLENYON ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94.74; Score 278.5; PB 14; Length 51; 98.14; Pred. No. 26-27;
Uve 0; Mismatches 0; Indels 1
       Luceis
C; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Dubaquio, Yves
APPLICANT: Lowman, Henry
TILLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1-1
CURRENT APPLICATION NUMBER: US/16/026,410
CURRENT FILING DATE: 2501-12-19
PRIOR APPLICATION NUMBER: US/03/477.924
PRIOR FILING DATE: 2000-61-15
SEC 1D NO 3
                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/15028410 Publication No. US20020160955Ai GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 98.18
Matches 51, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 94.33
Matches 50; Conservative
51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapions
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Matches
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TITEE OF INVENTION: Chimeric Protein Containing an
Intramolecular Chaperone-Like Sequence
                                                                                                                                                                                                                          Cuery Match 90.8%; Score 267; JB II; Length 86; Best Local Similarity 50.5%; Pred. No. 9.4e-26; Matches 52; Conscrative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cucry Match 90.8%; Score 267; DB 14: Length 86:
Best Local Similarity 60.5%; Pred. No. 9.4e-26:
Matches 52; Conservative 0; Mismatches 0: Indels
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ADDRESSEE: Townsend and Townsend and Crew Lip
STREET: Two Embascadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                        : FVNQHLCGSHLVEALYLVCGERGFFYTPKT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2. Application US/10028410
Sublication No. US2002016095541
GENERAL INFORMATION:
APPLICANT: Dubaquie, Yves
APPLICANT: Lowan, Henry
ITLE OF INVENTION: PROTEIN VARIANIS
FILE REFERENCE: P171281-1
GURRENT FILING DATE: 2001-12-19
PRIOR APPLICATION NUMBER: US/10/028,410
PRIOR APPLICATION NUMBER: US/09/477,924
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : FVNQHLCGSHLVEALYLVCGERGFFYTPKT---
                                                                                                                                                                                                                                                                                                                                                                                                                                             61 SLOKKGIVEÇCCTSICSLYQLENYCN 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31 ----RGIVEOCCTSICSLYQLENYCN 52 | HILLIHILL | HILLIHILL | HILLIHILL | HILLIHILL | ELQKRGIVEOCCTSICSLYOLENYCN 96
                                                                                                                                                                                                                                                                                                                                                                                                                   31 ----RGIVEQCCTSICSLYQLENYCN 52
       PRIOR APPLICATION NUMBER: US 60/204,490
PRIOR FILLING DAIE: 2000-05-16
NUMBER OF SEQ ID NOS: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/10054873 Publication No. US20020164712A1
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STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                          Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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US-10-028-416-2
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                                                                                   SEG ID NO 4
                                                                                                                                 TYPE: PRI
                                                                                                     LENGTH
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APPLICANT: USERIAL SACHING
APPLICANT: KITALINA, SACHING
APPLICANT: KITALINA, SACHING
APPLICANT: KURANO, YOSHINIC
APPLICANT: KURANO, YOSHINIC
APPLICANT: NCHATGSBO, Kaoru
APPLICANT: NISHIXONO, ISAO
TITLE OF INVENTION: Immunoassay For Measuring Human C-Peptide and Kit Therefor
TITLE OF INVENTION: Immunoassay For Measuring Human C-Peptide and Kit Therefor
CURRENT APPLICATION NUMBER: US/09/878,380
CURRENT FILING DATE: 2001-66-12
PRIOR FILING DATE: 2000-06-12
NUMBER OF SEO 12 NOS: 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FVNQHLGGSH;VEALYLQGERGFFY;PK+-GIVEQCCTS;CSLYGLENY;N 50
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Publication No. 08200300691741
GENERAL INFORMATION:
APPLICANT: Dubaquie, Yves
APPLICANT: Lowman, Henry B.
TITLE OF INVENTION: METHOD FOR TREATING CARTILAGE DISORDERS
FILE REFERENCE: P179481
CURRENT FILING DATE: 2002-07-02
FRIOR PAPLICATION NUMBER: US 60/248,985
PRIOR FILING DATE: 2000-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 90.4%: Sourc 267: DR 11: Loudth 80: Best Local Similarity 60.5%: Pred. No. 9.46-26: Matches 52: Conservative 6: Mismatches 6: Indels
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Prod. No. 9.56-27;
0; Mismatches 0; Indels
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CURRENT APPLICATION NUMBER: US/13/056.309A CURRENT FILING DATE: 2002.06.24 PRIOR APPLICATION NUMBER: US 69/287.072 PRIOR PILING DATE: 2001.04.27 PRIOR APPLICATION NUMBER: US 60/267.977 PRIOR FILING DATE: 2001.02.09 SEQ 10 NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 SLOKROTVEOCOSTOSOVOLENYON #6
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Patent No. US20020160435A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin version 3.3 SEQ ID No 1
                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 96.28;
Matches 50; Conservative
                                                                                                                                                                                                                       TYPE: PRT ORGANISM: HOMO Sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapions
US-09-878-380-1
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US-09-858-9358-4
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                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Ruykun, Gary
APPLICANT: Ogc, SCHE
TILLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
TITLE OF INVENTION: IMPAIRED GLUCOSE FOLERANCE CONSTITUENS
FILE REFERENCE: 00786/351004
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O
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60.5%; Pred. No. 1.1e-25;
trive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/205,658
CURRENT FILING DATE: 1998-12-03
SARLIER APPLICATION NUMBER: 08/857,076
EARLIER FILING DATE: 1997-05-15
EARLIER FILING DATE: 1997-05-05
EARLIER FILING DATE: 1997-07-07
EARLIER FILING DATE: 1998-05-15
NUMBER OF SEC ID NOS: 328
SOFTWARE: FASISED IOF WINDOWS Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FVNQHLCGSHLVEALYLVCGERGFFYTPKT-
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                                                                                                                                                                                                                                                                                                                                                                                                                                             : FVNOHICGSHLVEALYINCGERGFFYTPKI
                                                                                                                                                                                                                                                                                    LOCATION: 1..96
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31 ----RGIVEQCCTSICSLYQLENYCN 52
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Patent No. US20010029617A:
                TELEPHONE: (202) 408-400
IELEFAX: (202) 408-4400
INFORNATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
  FELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : Sequence 3, Application US/09815229
                                                                                                    LENGTH: 96 amino acids
                                                                                                                                                                                                                       ORGANISM: Escherichia
                                                                                                                         TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                               Protein
                                                                                                                                                      TOPOLOGY: linear
NOLECULE TYPE: protein
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 60.55
Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ) ORGANISM: Homo sapiens
US-09-205-658:125
                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-205-658-125
                                                                                                                                                                                                                                            FEATURE
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LENGTH: 110
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US-09-815-229-3
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ADDRESSEE: Fincegan, Henderson, Farrabow, Garrett s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90.8%; Score 267: DB 14: Length 90:
60.5%; Pred. No. 9.4e-26;
tive 0; Mismatches 0: Indels
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OPERATING SYSTEM: PC-DOS/MS-LOS
SOFTWARE: Patestin Release 41.6, Version #1.30
CURRENT APPLICATION DAYA:
APPLICATION NUMBER: 05/09/947,563
FILING DATE: 07-Sep-2001
CLASSIFICATION: <0nknown>
                  OPERATING SYSTEM: PG-DOS/NS-DOS
SOFTWARE: Datochtr Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 08/10/054,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Umproved process for obtaining
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Leslie WcDonell
REGISTRATION NUMBER: 33,872
REFERENCE/JOCKET NUMBER: 02481.1666-99590
                                                                                                                                                                                                                                                             NAME: Mydrott, Frank J
REGISTRATION NUMBER: 46,946
RFFERRUGE/SOCKET NUMBER: 020167-0041303S
                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     TOPUTCOT: Linear NOLECTIVE TYPE: Protein SEQUENCE DESCRIPTION: NEW TO NO: 4: US-10-054-873-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 09/134.836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 ----RGIVEQCCISICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 SLOKKGIVEQCCTSTCSLYQUENYCN 86
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Rubroder, Franz-Joser
Keiler, Reinhold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 1300 I Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Application GS/0947563
Patent No. US20320156234Al
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               LENGTH: 86 amino acids
                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dunner
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Best Local Similarity 60.55
Matches 52, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Washington
STAIE: D.C.
                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEC 1D NO:
                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 20005-3315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
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## APPLICANT: PILTUANCES FILTON:
### APPLICANT: PILTUANCES FRANTION:
### APPLICANT: PROMETION:
### APPLICANT: PROMETION:
### APPLICANT: Okumu, Prantion W
### TITLE OF INVENTION: USE DE INSULIN FUR THE TREATMENT OF CARTILAGEMENTS FILTED
### COURSENT APPLICATION NUMBER: US 60/192,103
### PRIOR APPLICATION NUMBER: US 60/192,103
### PRIOR APPLICATION NUMBER: US 60/192,103
### PRIOR PRIOR OF SEQ ID NOS: 17
### PRIOR PRIOR OF SEQ ID NOS: 17
### ORGANISM: Homo sapiens
### USE OF WITH USE OF WHICH USE OF WITH USE
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Search completed: September 15, 2003, 12:23:36 Job time: 22,8065 secs

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GenCore version 5.1.6
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	Copyright (c) 1993 - 2003 Compugen Did.
OM protein - pr	OM protein - protein search, using sw model
Run on:	<pre>September 15, 2003, 11:56:45 : Scarch time 8.57348 Seconds (without alignments) 583.264 Mallion cell updates/sec</pre>
Title: Perfect score: Sequence:	US-09-423-106-5 234 1 FVNQHLGGSHLUBALYLVGGIVEQCTTSLCS.VGLBNVCN 52
Scoring table:	BLOSUM62 Gapop 10.0 , Gapext, 0.5
Searched:	283308 seqs, 96168582 residues

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Fotal number of lits satisfying chosen parameters:

283308

Minimum Match 0% Maximum Match 190% Listing first 45 summaries Post-processing:

PIR\_76:\*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result heing printed, and is derived by analysts of the total score distribution.

insulla - spera ah insulla - timbark insulta - elephant epidermal growth ( - sei whal - doat produkan | North Am | procursor | precursor | oblicial epidermal growth this insulin - hamster insulin - Egyptian insulin precissor insulin precissor insulin precissor insulin precissor insulin precissor procurso insulin produsor insulin - sei what insulin - doat insulin - Arabian - common s precursor - cat precursor recursor insalin procursor prenusa Description insulis insulis 1080116 men, usu (usu SUMMARIES 1.05.2 1.05.2 1.05.2 1.05.2 1.05.2 1.05.3 Ouery Match Length DB Score 273.5 273.5 273.5 273.5 273.5 273.5 267.5 Result Š

A.Molecule type: protein A.Residues: 1-30:31-51 <HAM> C.Superfamily: insulin C.Keywords: hornone; procreas E:1-30/Domain: insulin chain B \*status experimental <BCH>

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insulin 2 precurso		insulin Il - North			1	1	١	insulin - slider t	Ω	insulin - Amphiuma	insulin - duckbill	insulin precursor	ā	insulin - American	1
IPKT2	INMS2	S44459	S44470	Odni	INTK	INOS	A61129	A60414	151221	S61361	863590	IPCH	IPDK	INAQ	INGXA
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84.4	च . च छ	93.7	83.7	83.2	83.2	83.2	83.2	83.2	81.1	81.0	80.1	79.8	79.4	78.7	78.6
248	248	246	246	244.5	244.5	244.5	244.5	244.5	238.5	238	235.5	234.5	233.5	231.5	231
: ₹	31	3.2	33	<b>7</b> 5	35	42	37	æ en	on m	<b>○</b> *		4.2	~. <b>.</b>	4.4	5.5

### ALIGNMENTS

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Checossion: A93342, A59082

Elshihara, Y.; Saito, I.; Ito, Y.; Fujino, M.
Mature 18., 1466-1469, 1558

Elshihara, Y.; Saito, I.; Ito, Y.; Fujino, M.
Mature 18., 1466-1469, 1558

Ancession: A9342

Ancession: A9342

Ancession: A9342

Ancession: A9342

Ancession: A9342

Ancession: A9462

Ancession: A9462

Ancession: A9468

Ancession: A9468

Ancession: A94682

Ancession: A94682

Ancession: A94682

Ancession: A94682

Ancession: A94682

Ancession: A96682

Ancession: A96682

Ancession: A96682

Ancession: A96682

Ancession: A96682
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Cispecies: Balaenoptera physalus (finback whale, common rorqual)
Cispecies: Balaenoptera physalus (finback whale, common rorqual)
Cispecies: Balaeni A91918
R:Hama, H.; Titani, K.; Sakaki, S.; Narita, K.
Cispecies: 56, 285-293, 1964
A:Title: The amino acid sequence in fin-whale insulin.
A:Reference number: A91918
A:Accession: A91918
                                                                                         Otsperies: Physeler catodon (sperm whale)
Citato: 31-Mari1992 *sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          : FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FVNQHLCGSHLVEALYLVCGERGFFYTPKA-GIVEQCCISICSLYQLENYCN 51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'Superjaciny: insulin

'Skywords: hormone: pancreas

Fil-30/Nomals: insulin chain B #status experimental <MAI>

Fil-30.15.70cmain: insulin #status experimental <MAI>

Fil-51/Domain: insulin chain A #status experimental <ACH>

Fil-37.19-50.36-41/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.0%; Score 273.5; DB 1
96.2%; Pred. No. 1.5e-24;
Live 0; Mismatches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match
Sest Local Similarity 90.400
Sest Local Similarity 90.400
                                                            insulin - sperm whale
PESULT 1
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C.Accession: A01591
R.Buenzli, H.F.; Humbel, R.E.
R.Buenzli, H.F.; Humbel, R.E.
A.File: Physiol. Chem. 353, 444-450, 1972
A.Title: Isolation and partial structural analysis of insulin from mouse (Mus musc A; Reference number: A01591; MUID:72189454; PMID:5028210
A.Contents: composition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ribliveira, A.E.A.; Machado, D.L.T.; Gomes, V.M.; Xavier-Neto, J.; Pereira, A.C.P. Protein Pept. Lett. 6, 15-21, 1999
Aprile: Jack bean seed goat contains a protein with complete sequence homology to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scalin procursor - jack bean (fragments)
NiAlternate names: hypoglycemic agent; plant insulin
Cispecies: Canavalia cusiformis (jack bean)
Cibace: 07-Dec-1999 *sequence_revision 07-bec-1999 *text_change 10-bec-1999
CiAccession: B59151: A59151
                                                                                                                   Cospecies: Cricetinae gen. sp. (hamster)
Cobate: 31-Mar-1392 #sequence_revision 31-Mar-1392 #text_change 16-Jul-1999
Concession: A91456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insulin - Egyptian spiny mouse (tentative sequence)
C:Species: Acomys cahirinus (Egyptian spiny mouse)
C:Date: 13-Jul-1981 #sequence_revision 13-Jul-1981 #text_change 31-Mar-2000
                                                                                                                                                                                                                                                                                                 Wineckyn, F.A.; Delcher, H.K.; Steinman, H.; Lebovitz, H.E.
Fod. Froc. 32, 300, 1973
Ajfilie: Structure of hamster insulin: comparison with a tumor insulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSLCSLYQLENYCN 52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cuery Match 92.3%; Score 271.5; DB 1; Length 51; Best Local Similarity 94.2%; Pred. No. 2.5e-24; Matches 49; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 51:
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Aspects of A01991
Aspectation A01991
Aspectation A01991
Aspectation A01991
Aspectation A01991
Csuperfamily: Installin
Csuperfamily: Installin chain B status predicted A000
F)1-30,A1-51/Product: insulin status predicted A000
F)1-31/Appain: Insulin chain A status predicted A000
F)1-37,19-50,A36-41/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        91.3%; Score 268.5; Db 1; 92.3%; Pred. No. 5.5e-24; attive 3; Mismatches 0;
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A;Accession: B59151
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A;Kesidues: 1-30 <MACH>
A:Accession: A59151
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Bost Local Similarity
Matches 48: Conserv
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An other than 1966
An other than 1966, 1966
An other species variation in the amino acid sequence of insults.
An effectence number: A90029; MUID:66160119; PRID:5949593
An effectence number: A90029; MUID:66160119; PRID:5949593
An effected type: protein
A. Molecule type: protein to a protein the species of elephant is not given, but it is most probably the Indian elephant
A. Molecule type: Indian the Indian B #status experimental AMATH
F. 130, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 1917, 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          policinal growth factor/single chain insulin fusion protein. - Pachilus larges (tragment) (Species: Bacillus brevis (compensional file-Aug-1800 aspendence_rowision 18-Aug-1800 aspendence_rowision 18-Aug-1800 aspendence_rowision 18-Aug-1800 aspendence_rowision 18-Aug-1800 aspendence_rowision 18-Aug-1800 aspendence_rowision 18-Aug-1800 and 18-Aug-180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C:Species: Elephantidac gen. sp. (elephant)
C:Date: 24-Apr-1984 #scquencc_revision 30-Sep-1988 #text_change 16-5nl-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30.65
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l; Indeis
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                                                                                                                                                                                                                                                                                                                                                                        S. GOG. S
                                                         P.31-51/Domain: insuiin chain A *status experimental <APHs P.7-37,19-50,36-41/Pisatiide bends: *status predunted
F)1-30,31-51/Product: insuin: *status experimenta. + MAT>
                                                                                                                                                                                                                                 93.0%, Scora 273.5; U# 1
liarity 96.2%; Pred, No. 1.5c 24;
Conservative 0; Mismatches 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0: Mismatches
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A:Residues: 19:28 <KO2>
C:Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 50; Conserv
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                                                                                                                                                                                                                                                           Query Match
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Risieber, P.; Kamber, B.; Hartmann, A.; Joehl, A.; Riniker, B.; Rittel, W.
Helv. Chim. Acta 57, 2617-2621, 1974
ArTitle: Totalsynthese von Humaninsulin unter gezielter Bildung der Disulfidbindun
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C.Dute: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
C.Accession: B42179; A67332; S16494; S22056
R.Seino, S.; Bell, G.I.i, M.H.
Mol. R.O. Bvol. 9, 193-203, 1992
A.Title: Sequences of primate insulin genes support the hypothesis of a slower rat A.Reference number: A42179; MuID:92219953; PMID:1560757
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A:Reference number: A91658; MUID:73040007; PMID:4803534

A:Concents: annotation: Synthesis of residues 57-87

A:Concents: A: Jaeger, 3: Koenig, W.

Chem. Ber. 106, 2347-2352, 1973

A:Title: Synthesis of the complete sequence of human proinsulin C-peptide and its
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Riocene, J. 312, 869-974, 1995
Altie: Sequence requirements for prinsulin processing at the B-chain/C-peptide
A:Reference number: 558651, MJID:96013185, PMID:7575420
A:Contents: annotation; site-directed mutagenesis study of proteolytic processing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A:Note: disulfide-bonded human insulin was synthesized, the synthetic hormone was A:Note: article in German with English abstract P:Naithanj, V.K.
                                                                                                                                                                                                                                   A:Molecule type: protein

R:Residues: 57-87 <ROAD

R:Lucasson, A.M.; Julier, C.; Beressi, J.P.; Boitard, C.; Froquel, P.; Lathrop,

R:Lucasson, A.M.; Julier, C.; Beressi, J.P.; Boitard, C.; Froquel, P.; Lathrop,

Nature Genel, 4, 305-310, 1993

A:Title: Susceptibility to insulin dependent diabetes mellitus maps to a 4.; kb.,

R:Reference number: ISB114; MUID:93364428; PMID:8358446
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A:Residucs: 1-59,63-11C <RES>
A:Cross-references: G3:115440; NID:9307071; PIDN:AAA59179.1; PID:9307072
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A:Reference number: A91186; MUTD:71257722; PMTD:5560404
AAPCRESION: A91186
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A:Contonts: annotation; synthesis
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R:Kaufmann, C.E.; irminger, J.C.; Haiban, P.A.
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A:Map position: 11p15.5-11p15.5
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The two chains are probably produced from the same precurso:
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                                                                                                   A:Residues: 31-51 <MACA>
C:Comment: The two chains are probably prediced from the C:Superfamily: insulin
E;1-30.31-51/Product: insulin status experimental <MAT>
F;1-30/Domain: chain B #status experimental <CHB>
F;31-51/Domain: chain A #status experimental <CHB>
F;31-51/Domain: chain A #status experimental <CHB>
F;31-37,19-50,36-41/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91.0%; Score 267.5; DB 2; 92.3%; Pred. No. 7.2e-24;
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A;Residues: 57-87 <0785 ×
A:Residues: 57-87 <0785 ×
Bur. J. Biochem. 20, 190-199, 1571
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                                                                A:Molecule type: protein
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Privatesano, W.; Gronoberg, U.; Leinewebor, M.; Wengenmayer, F.; Winnacker, B.L.
Sente 19, 179-183, 1982
A.Filte: Tro nuclearide sequence of cDNA coding for proproinsulin from the primate
A.Reforence number: J09178; MUID:83080474; PMID:5184252
A.Recession: J09178
A.Rocession: J09178
A.
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C:Date: 13-Jul-1981 #sequence_revision 13-Jul-1981 #text_change 15-Jul-1999
07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 16-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 FVNQFLCGSHIVEALYLVGERGFFYTPKTRRRADPQVGQVELGGGPGAGSIQPLALEG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FVNQHECGSHLVEALY: VCGERGFFYTPKTRGIVEQCCTSICSLYOLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AJTILE: Species variation in the amino acid sequence of insulin. A)Reference number: A90029; MUID:66160119; PMID:5949593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 267; DB 2; Length 110;
Pred. No. 1.6e-23;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FVNQRICGSBLVEALYLVCGERGFFYTPKT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85 SLOKRGIVEOCCTSICSLYQLENYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 ----RGIVEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90,8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
Fest Local Similarity 60.59
- Thes 52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Am. J. Med. 40, 662-666, 1966
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A;Residues: 1-30;31-51 <SMI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: A01586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       insulin - sei whale
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                                     C.Accession: JQ0178
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Matches
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                                                                                                             Approximates the content of the cont
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Cispecies: Pan troglodytes (chimpanzee)
Cispecies: O4-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 16-Ji: 1333
Cispecies: O4-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 16-Ji: 1333
Cispecies: O4-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 16-Ji: 1333
Riseino, S.: Bell, G. I.: Li, W.H.
Mol. Bell, Bool, 901, 913-203, 1992
A: Reference number: A42179; MulD: 92219933; PMID: 1560757
A: Reseasion: A42179
A: Molecule type: DNA
A: Researce type: DNA
A: Researce contracted from NCB1 backbone (NCB1P: 97867)
Cispecies: Sequence extracted from NCB1 backbone (NCB1P: 97867)
Cispecies: Sidilin Insulin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25 FVNQHLCGSHI,VEALYLVGGBRGFFYTPKTRRBAETLQVGGVELGGGPGAGSLGPTALEG 84
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-:
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60.5%; Pred, No. 1,60-23;
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C;Species: Macaca fascicularis (prab-cating macaque)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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Best Local Similarity 60.5
Matches 52: Conservative
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Best Local Similarity
Thes 52; Conscrye
                                              A;Molecule type: DNA
A;Residues: 1-110 <SEI+
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           insulin - Arabian camel (fontative sequence)
C.Species: Camelus dremedatius (Arabian camel)
C.Species: Camelus dremedation
C.Species: Annual description of insulin of camelus (Camelus)
J. Fact Med. Saphdad 14, 16-28, 1972
A.Tille: The isolation and characterization of insulin of camel (Camelus dremence number: A92762
A.Accession: A92782
A.Accession: A92782
A.Accession: A92782
A.Accession: A92782
A.Accession: A92782
C.Superfamily: Insulin chain B *status experimental description of insulin chain A *status experimental description of insulin a *
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C.Species: Sus scrofd domestic pig)
C.Species: Sus scrofd domestic pig)
C.Species: Sus scrofd domestica (domestic pig)
C.Species: Sus scrofd domestica (dun-1941 #rext_change in Jate 2. Jun-1941 #sequence_rxysion 22 Jun-1941 #sequence_rxysion 22 Jun-1941 #sequence_rxysion 2. Accessor: A01583 #sequence_rxysion and action acid sequence.
C.Accessor: R.E.: Elis, R.M.: Brower, W.W.
Schence, R.E.: Elis, R.M.: Brower, W.W.
A.Reference number: A94240, M910:682864485; PMID:54.7663
A.Received type: protein
A.Residues: 1-34, 70, 36-34 <CHA.
S.Molecule type: protein
A.Reference number: A94572
A.Accession: A94572
A.Accession: B4 <CH2.
A.Reference number: A90344
A.Reference number: A90344
A.Reference number: A90344
A.Recession: S16492
A.Molecule type: protein
A.Residues: 1-36:31-51 <ARS.
A.Residues: 1-36:31-51 <ARS.
A.Residues: L.: Dangaard, U.
Horm. Metab. Res. 20, 476-480, 1988
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C.Superfamily: insulin
C.Keywords: hormone: pandreas
E1-130/Domain: insulin chain B *status experimental <8CHP
F1-130,31-51/Product: insulin *status experimental <ACHP
F31-51/Domain: insulin chain A *status experimental <ACHP
F7-37,19-50,36-41/Disuilide bonds: *status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89.6%; Score 263.5; DN 3-90.4%; Pred. No. 2.1e-23; Jvo. 1: Mismatches A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 90.4
Matches 47; Conservative
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Matches 47; Conservative
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A Note: the authors report the characterization of a connecting peptide variant land A Accession: #60835
A Molecule type: protein
A Residence: 33-62 <8N2>
AR Residence: 33-62 <8N2>
A Residence: 71. Dodgson, 6.: #Odgkin, D.: Mercola, D.
Adv. Protein Chem. 26, 279-402, 1972
A: Title: Insulin. the structure in the crystal and its reflection in chemistry and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Superfamily: Insulin
C; Keywords: Dormone; pancreas
F; 1-30/Domain: insulin chain B #status experimental <BCH>
F; 1-30,64-64/Product: Insulin #status experimental <MAT>
F; 34-54/Domain: connecting peptide #status experimental <CPEP>
F; 64-64/Domain: insulin crain A #status experimental <ACH>
F; 64-64/Domain: insulin crain A #status experimental <ACH>
F; 770,19-83,69-74/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                        A,Reterence number: A90017
A,Comtenis: annotation: X-ray crystallography, 1.9 angstroms
A/fitle: Proinsalin heterogeneity in pigs.
A/Reference number: A60835: MUID:89032178; PMID:3181865
A/Accession: A60835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89.5%; Score 263; DB 1;
60.7%; Prod. No. 3.6e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51; Conservative
                                                                                               A:Molecule type: protein
A:Residues: 33-33,40-62 <SNE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sest Local Similarity
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Componen Ltd.
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- protein search, using sw model September 15, OM protein Run on:

2003, J1:54:00 ; Search Time 4.84588 Seconds (without allements) 504.633 Million cell updates/sec US-09-423-100-5

1 FVNQHLCGSHLVEALYLVCG.....IVEQCCTSICSLYQLSNYCN BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table: Perfect score: Sednesce:

127853 segs, 47025705 residues Searched: Total number of hits satisfying chosen parameters:

length: 0 length: 200000000 Minimum DB seq Maximum DB seq

Listing first 15 summaries 100. Post-processing: Minimum Match Maximum Match

SwissProt\_41:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result, being printed, and is derived by analysis of the total score distribution.

	÷ į				douces	PC150F CTT- 841 1-1	Paddog nacede Table	P86410 pan trusled			POLYIS depta bilton			29;xi3 spermohilu		21 canis	FOLMES cricefulus	P01317 bos :aurus		-		F01310 equus cabal	of inch		P01325 mis miscula	P01322 rattus norv	P07454 anser anser	$\sim$	P01523 rattus norv	$\sim$	328 hys	E-0	89	C9tgy7 ornithorhyn
SUMMARIES	CI		INS_ELEMA	INS_ACCOR	INS_CERAE	NAMEDIAN	INS_MAGEA	INS PANTS	INS_BALRO	INS_CAMDR	INS_CAP#1	INS_PIG	INS_PABIT	INS_SPETR	INS_FELCA	INS_CANFA	INS_CRILO	NIVOE_SNI	INS_PSAOR	INS_DIDMA	INS_SHEEP	INS_HORSE	INS_CHIBR	INS_AOTTR	INST_MOUSE	INS1_RAT	INS_ANSAN	INS2_MOUSE	INS2_RAT	INS_ACIGU	INS_HYSCR	INS_TRASC	INS_SELRF	INS_CRNAN
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	Query March	93.0	<u>.</u>	91.3	8.06	ω 	ۍ د	8.0	9.6	9.6	9.6	6	5.5	S . 6	æ.	9.1	₹. 9	6.7	7	7.2	9.9	85.7	5.5	₹.5		4.7	6.5	4.4				3.2	1.1	0.1
æ	S G																																	
	Score		273.5	268.5	267	267	267	267	263.5	263.5	263.5	263	263	263	262.5	262	256	258.5	257	256.5	254.5	252	251.5	251	250	249	248.5	248	248	246	244.5	244.5	238.5	235.5
	Result No.		2	m	<b>-</b> ,#	S	Ģ	7	80	σ	10	11	12	13	14	15	91	17	8	13	20	21	22	23	24	25	26	27	28	29	30	31	32	33

P01332 gallus gall	PC1333 anas platyr	P12703 alligator m	P09476 lepisosteus	P12768 zaocys dhum	P01334 crotalus at	P12706 xenopus lae	P12707 xenopus lae	P14806 petromyzon	P09477 platichthys	P29335 amia calva	P23187 oncorpypchu
INS_CHICK	INS_ANAPL	INS_ALLK:	INS_LEPSP	INS_ZAODH	INS_CROAT	INS1_XENLA	INS2_XENLA	INS_PETMA	INS_PLAFE	INS_AMICA	INS ONCGO
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167	8.7		2.5	. ( (C)	5.	306	106	57	53	52	20
79.8	79.4	100	78.6	77.7	77.4	77.0	77.0	75.5	73.5	72.8	71.8
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234.5	233.5	231		22	7	.~ı	C)				

# ALIGNMENTS

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ishthara Y., Saito T., ito Y., Fujino M.;
Yaturdara et sporm- and sei-whale insulins and their breakdown by
whate pepsin."
Nature 181:1468-1469(1958).
                                                                                              Halachophera physalus (Finback whale) (Common rorqual), and Physeter catodon (Sperm whale) (Physeter macrocophalus). Bukaryolas Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla: Butheria; Cetartiodactyla; Cetacea; Mysticeti; Halachopteridae; Balachoptera; Mysticeti; MCHILIAXID:9770, 9755;
                                                                                                                                                                                                                                                                                                                                                                                                                                       -:- SUBCELLULAR LOCATION: Secreted.
-:- SUBINARITY: BELONGS TO THE INSULAN/IGF/RELAXIN FAMILY
PITS: 891918; INWHP.
PIR: 893142; INWHP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9007B514691A7CDD CRC64;
                                                                                                                                                                                 SPECIES=B.physalus;
Hama H., Titasi K., Sakak! S., Narita K.;
Hama H., Titasi K., Sakak! S., Narita K.;
"The arino acid sequence in tin-whale insulin.";
[1. Nicohem. 56:285-291(1964).
                                         01, Created)
61, Last sequence update)
34, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INSULIN A CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INSULIN B CHAIN
                     51 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00078; IIGF; 1.
PROSITE: PS00262; INSCLIN; 1.
Insulin family; Hormone; Glucose metabolism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NTERCHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INTERCHAIN
                     PRT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP; P01317; TAPH.
InterPro; TPR004825; Ins/IGF/relax.
SMART; SM50078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
31
51
37
50
41
5766 MW;
                     STANDARD;
                                                                                                                                                                                                                                                                                                                               SPEC: ES=P.catodon;
                                       21-JUL-1986 (Rel.
22-JUL-1986 (Rel.
61-OCT-1996 (Rel.
                                                                                                                                                                                                                                                     SPECIES-P.catodon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51 AA;
                                                                                                                                                                         BARTIAL SEQUENCE
                     INS_BALPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
DISULFID
DISULFID
SECUENCE
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                                                                                                                                                                                                                                        SPOUSINCE
                                                                            insulin.
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RESULT 1
INS_BALPH
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MEDL: NE=72189454: PubMed=5028210;
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51
37
50
41
8788 MW;
                                                                                                                                                                                                                                                                                                                                            91.3%;
92.3%;
                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                   2
                                                                                                                                             DISULPIDE BONDS.
                                                                                                                                                                              PIR, A01591; INMSSP.
                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                         HSSP; P01368; 11YM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insuith precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 57-87.
                                                                                                                                                                                                                                                                                                                     51 AA;
                    NOILISCHWOO
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Best Local
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Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Acceys,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                Sdeta
                                                                                                                                                                                                                                                                                                                                             AND
                                                                                                                                                                                                                                                                                                                                                                 CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
DISULFIDE BONDS.
                                                                                                                                                                                                                Elephas maximus (indian elephaut).
Eukaryota, Metazoa: Clordata; Craniala: Vellekrala: Euteleksiomi:
Mammalia: Eutheria: Probosoidea: Elephantidov; Elephas.
                                                                                                                                                                                                                                                                                                                                            INCREASES CELL PERMEABILITY IC MONOSACCHARCHES, AMING ACHUS AC
FATTY ACIDS, II ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FVNOHIGGSHIVEALYINGGRRGFFYTPXIRGIVROCTFILSLYQLENYCK 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FVNQHLGGSHLVEALVEALVGGERGFFYTFKY-GTVEGGTGVGGSLXGLENYTK 5)
                                                                                                                                                                                                                                                                                                                                                                                                  -:- SUBCELLUIAR LOCATION: Secreted.
-:- MOSTELLANDOS: THE SPECIES OF ELEPHANT :S NOT GIVEN, BUT IT MOST PROBABLY THE INDIAN ELEPHANT (ELEPHAN MAXIMUS).
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN PAMILY.
                                                                  PSYNGHLOSSHLYSBALYLANGSBRGSPYTPKA-GIVENOTSICSLYGLENYCK 51
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...
                                                      PVNQHLCGSHLVBALYLVGGRGFFYTPXTRG1VBUCGTSIDSLYQLENYON
                                                                                                                                                                                                                                                                                                          "Species variation in the amine acid sequence of insulin ";
Am. 5. Med. 40:662-666(1966).
-!- FUNCTION: INSULIN DECREASES BLOGD SLUCOSE CONCENTRATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 273.5: DM 7: Length 51:
         Length, 51:
        Score 273.5; 38 1; Length 5 Pred, No. 4.9e-27; 0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 46-27;
1;
                                                                                                                                                       21-39L-1986 (Rel. 01, Greated)
21-39L-1986 (Rel. 01, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 61, Created)
21-JUL-1986 (Rel. 61, Last sequence update)
01-NOV-1997 (Rel. 35, Jast annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Insulin family: Hormone: Glicose metabolism.
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ص
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INTERCHAIN.
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O
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InterPro; IPR004825; Ins/IGE/relax.
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5; PS00262; INSUEIN; 1.
       93.0%;
96.2%;
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Ouery Match
Best Local Similarity 96.2%
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49; Conservative
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31
50
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P01324:
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PROSITE;
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CHAIN
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Pagenti H.F., Humbel R.E.,
"Isolation and partial structural analysis of instilin from mouse (Musimoushius) and spiny mouse (Aconsy cahirinus).
"Explaction and spiny mouse (Aconsy cahirinus)."
"Explaction: "NSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND FATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHATE CYCLE, AND GLYCOCGEN SYNTHESIS IN LIVER.
-!- SOBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cercepithecus aethiops (Green monkey) (Grivet).
Eukaryota: Metazoa; Chordata: Craniata: Vertebrata; Euteleestomi;
Mambalia: Eutheria; Primates: Catarrhini; Cercopithecidae;
Cercepithecinae; Cercopithecus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
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MEDLINE-92219953; PubMed-1550757;
Setion S., Bell G.J., Li M.;
Sequences of primate insulin genes support the hypothesis of sicwer rate of molecular evolution in humans and apes than in
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992HD8B629047D3D CRC64:
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01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last Sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
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SMARI; SM06078; I.GP; 1,
PROSITE; PS00262; INSULIN; 1,
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A STANDERFORTERS;

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A STAUSDERS R.L., Feligold E.A., Grouse E.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buctow K.H., Schaefer C.R., Schuler G.D.,

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Human and mouse CDNA sequences.
                                                                                                                                                                                                                                                                               Nucleofide sequence of a CDNA Glone encoding human preproinsulin.";
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MEDLINE=75077277; PubMed=44443293;
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MEDLINE=93364428; PubMed+8358440;
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                                                   Nature 282:525-527(1979).
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         Rutter M.C.;
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                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the SWES listille of Bloinformatics and the SMED consequence. The European Bloinformatics institute in There are no restrictions on its use by non-profit institutions as long as its context is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.cc/announce/or send an email to license@isb-sib.ch.
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Mammalia; Eutheria; Primares, Catarrinni; Hominidae; Bore.
NCBL_TaxID=9606;
HETERODIMER OF A B CHAIN AND AN A CHAIN CLUKED BY IW
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Bell G.J., Swain W.F., Pictet R.L., Cordell B., Goodman H.M.,
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                                                                  SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
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InterPro: IPR604825; Ins/(GF/relax.)

Pfam, PF00449; Institut 1.

PROSTITE, SMO0708; ILGF: 1.

PROSTITE FS00262; INSTITUT 1.

Insulin family: Hormone; illucose metabolism; Signal.
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Ullrich A., Dull T.J., Gray A., Brosius J., Sures
"Genetic variation in the human insulin gene.";
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21-JUL-1986 (Rel. Cl. Last Sequence update)
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                                            SUBCELLULAR LOCATION: Secreted
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covel point mutation in the human insulin gene giving rise to
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21-401-1986 (Rel. 01, Created)
13-A0G-1987 (Rel. 05, Last sequence update)
13-FBB-1996 (Rel. 33, Last sequence update)
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                      hyperprofisalloemia (profusulin Kyoto). (clin. Invest. 89:1902-1907(1992).
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                                                                                                                                                                                                                                                                                    STRUCTURE BY NWR. MEDLINE-91242467: Pubmed-2036420;
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MEDLINE-91265527; Pubmed-1646635;
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MEDLINE-83080474; PubMed-6184262;
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NCBL_TaxID=9541;
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Barbetti F., Raben N., Kadowaki I., Cama A., Accill D., Jahbuy K.E.
Barbetti F., Raben N., Kadowaki I.,
Marchitch J.A., Taylor S.I. Rotti J.,
Marchitch J.A., Taylor J.,
Proinsulin molecule, identification of the smithin by direct
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yano H., Kitano N., Morimeto M., Polonsky K.S., Isura H., Seino Y.,
                                                              Studies on polypeptides, IV. The synthesis of C peptide of Elman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shibasaki Y., Kawakami T., Kanazawa Y., Akanima Y., Takaku E., Postinansialional oleavage of proinsalin is becaked by a point mutation in familial apperpronsalinemia.";
                                                                                                                   Hoppe-Seyler's Z. Physiol. Chom. 354:659-672(197-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               serine-for-phenylalanine sibslitution.";
Proc. Natl. Acad. Sci. U.S.A. 80:7390-7394(1983).
[17]
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71:164-169(1990)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT KYOTO LEU-89.
MEDLINE=92291307: PubMed-1601997:
                                                                                                                                                                SYNTHESIS OF 65-69 AND 70-73.
MEDLINE=73161263: PubMed-4698555;
                    MEDLIN5=75046007; PubMed=4803504;
Naithani V.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J. Clin. Endocrinol. Metab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VARIANT WAKAYAMA LEU-92.
SYNTHESIS OF 57-87
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                                                                                                  proinsulin.
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[15]
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation 8 25 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREAEDLQVGOVELGGGPGAGSLQPLALEG Him Q.-X., Weiss M.A.; "Toward the solution structure of human insulin: sequential 2D IB NMK assignment of a des-pentapoptide analogue and comparison with crystal structure."; "Comparative 2D NMR studies of human insulin and despentapeptide insulin: sequential resonance assignment and implications for protein Hud O.-X., Welss M.A.,
"Two-dimensional NMM studies of Des.(B26-330)-insulia: sequence"two-dimensional NMM studies and effects of solvent composition.";
Blochim. Blophys. Acta [378:101-116(1991). Gaps Figure 19:179-183(1982).

"The cuclectide sequence of cDNA codiny for preproinsulin from the primate Macaca fascicularis.";

face 19:179-183(1982).

-:- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. 17

INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND FATTY ACCELERATES GLYCOMYSIS, THE PENTOSE PHOSPHATE CYCLE, AND GLYCOSEN SYTHERIS IN LIVER.

-:- SURCHIT: HETPRODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO Macoca fascientaris (Grab eating macaque) (Cybomolqus monkey). Eukaryota; Metazoa: Chordata; Craniata; Verrobrata: Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae: Length 110; -!- SUBCELLULAR LOCATION: Secreted. -!- SIMILARITY: BELONGS IN THE INSULIN/IGF/RELAXIN FAMILY 0; Indels Wetekam W., Groneberg J., Leineweber M., Wengenmayer F., Winnacker E.-L.: 50.8%; Score 267; DB 1; 60.5%; Pred. No. 6.3e-26;

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send an email to license@isb-sib.ch)
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the Buropean Bioinformatics institute. There are no costrictions on its muse by non-profit institutions as long as its content. Is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license afterement (See http://www.isp sib.cc/ancounce/or send an email to license@lsb-sib.cb).
                                                                                                                                                                                                                                                                                                                                                                          25 FVNOHLOGSHLVEALYLVOGERGFFYTPX FRREALDFQVOQVELOGGFGAGSLAFFALLEG A.F.
                                                                                                                                                                                                                                                                                                                          34, Gaps
                                                                                                                                                                                                                                                                                                                                                 MOI. Biol. EVOI. 9:193-263(1992).
-!- FUNCTION: INSULIN DECREASES BLOOD GIUCOSE CONCENTRATION. IT INCREASES CELL PERMEMBLITY TO MONOSACCHARIDES, AMIND ACIDS AND FAITY ACIDS. IT ACCERRATES GLYCOLESSIS, THE PENTOSE PHOSPHATE CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SUBUNITI HERERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
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Mammalla: Eitheria: Primates; Catarrhini; Hominidae: Fan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-92219953; PubMed-1560757;
Seino S., Bell G.f., Li M.;
'Sequences of primate insulin genes support the hypothosis of
slower rate of molecular evolution in humans and apos than in
                                                                                                                                                                                                                                                                                                 Length 110;
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                                                                                                                                                                                                                                                                                                                           U: Indels
                                                                                                                                                                                                                                                                          11991 MW; 8306E33A80A420F9 CRC64;
                                                                     EMBL; J06336; AAA36849.1; ...
PIR; J00178; J00178.
HSSP; PO1308; JACO
InterPo; JER004825; Ths/IGF/relax.
PFAM; PFC049; Insulin; I.
PFRITS; PRC027; INSULNB.
SMART; SM0078; IIGF; I.
PROSTE; PR00262; INSULNB.
INSULNB; PR00262; INSULNB.
INSULNB; PR0018M; Signal.
INSULNB; PAMPOND; G. UCOSE METADOLISM; Signal.
SIGNAL.
24
                                                                                                                                                                                                                                                                                                Score 267; DB 3;
Pred, No. 6,3e-26;
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01-APR-1993 (Rel. 25, Last Sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                   INSULIN B CHAIN.
                                                                                                                                                                                                                          INSULIN A CHAIN.
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60.5%
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Best Local Similarity
Bast S2: Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT INCREASES CELL PERKEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND FAITY ACIDS. IT ACCELEARES GLYCOLYSIS, THE PENIOSE PHOSPHATE CYCLE, AND GLYCOGGEN SYNHAISS IN LIVER.
-!- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ishihara Y., Saito T., Ito Y., Fujiro M.;
Skructure of sperm- and sel-whale insulins and their breakdown by
the a nears "."
                                                                                                                                                                 Insulin family; Hormone: Glucose metabolism; Signal; 3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Balaenoptera borealis (Sei whalo).
Eukaryota; Mctazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Balammalia: Eutheria; Cetartiodactyla; Cetacea; Mysticeti;
Balaenopteridac; Balaenoptera.
                                                                                                                                                                                                                                                                                                                                                                                                                    34:
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Pred. No. 6.36-26;
Ored. No. 5.30-26;
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-:- SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
PIR; A01582; INWRIS.
HSSP; RO1317; JAPH.
                                                                                                                                                                                                                                                                                                                                  12025 MW; 41EB8DF79837CEF5 CRC64;
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C PEPTIDE.
INSULIN A CHAIN.
INTERCHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P013.4;
21-JJL-1986 (Rel. 01, Created)
21-JJL-1986 (Rel. 01, Last Sequence update)
91-JCT-1996 (Rel. 34, Last annotation update)
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SMART; SM00078; IlGF; 1.
PROSITE; PS00262; INSULIN; 1.
                   P1R; A42179; A42179.
PDB; 1EFE; 29-MAR-0C.
InterPro; IPR004825; Ins/IGF/relax.
                                                                                                                                                                                                                                                                                                                                                                         90.8%;
60.5%;
EMBL: X61089; CAA43403.1; -.
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                                                                                                                                           PROSITE; PS00262; INSULIN;
                                                                           Ptam; PF00049; Insulin; 1.
PRINTS; PR00277; INSULINB.
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Best Local Similarity 60.59
Matches 52, Conservative
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1; Mismatches
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STANIN-Large white,
STATIN-Large white,
Marchine, 22135958, Pubmed=12140686,
Amarger V., Nayyen M., Laere A.S.,
GCOUGES M., Andersson L.)
                                                                                      MEDLINE-66160319; PubMed-5949593;
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90.48;
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    Bovidue: Caprinae: Capra.
NCBL_TaxTD=9925;
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37
50
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47; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID-9823;
                                                                                                             Smith L.F.:
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SISULFID
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SEQUENCE
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Best Local 9
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CHAIN
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INS_PIG
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      9
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Eukaryota, Metazoa, Chorduta, Craniata, Vertebraia, Euleleastam<sup>er</sup>
Mammalia, Eutheria, Cetartiodactyla, Kuminantia: Pecera, Reverber
                                                                                                                                                                                                                                                                                                                                                                                                                                Camelus dromedarius (Gromedary) (Arabian camel).
Bukaryota, Metazoa: Chordata: Crantata: Vertebrara: Entoleusromu:
Mammalia: Eutheria: Cetartiodactyla: Tylopoda: Camelidae; Camelus
NCBI_TaxID+9838:
                                                                                                                          1 FVNOHIGGSHLVBALVINGBRGFFYTPKTRGIVEGALTSLOSLYGLENYN 52 HTH 1111 THT 1111 THT 1111 HTH 111 THT 111 HTH 11 THT 111 THT 11 
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                                        on 89.6%; Score 263.5; DB 1; Length 91; 1 Similarity 92.3%; Prod. No. 8126-26; 48; Conservative C: Mismatches 3; Indels
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9007BSCB400A7DDD CRC64:
                                                                                                                                                                                                                                                                                                                   21-001-1986 (Rel. 01, Created)
21-001-1986 (Rel. 01, Last sequence update)
01-FES-1996 (Rel. 03, Last amogration update)
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21-30L-1986 (Rel. 0), Last sequence update)
61-FER-1996 (Rel. 3), Last aunolation ipdate
                                                                                                                                                                                                                                                                              5. A.A.
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Hormope, Glacose metabolism
                                                                                    C: Mismaiches
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INTERCHAIN.
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5723 NW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00078; TLGF; 1.
PROSITE; PSGC262; INSULIN;
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Matches 47; Conservative
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41
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HSSP; P01317; 2INS.
51 AA;
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Insulin family:
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P01319;
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SEQUENCE
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Best Local 8
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Sus scrofa (Pig).
Eukaryota, Matazoa, Chordata, Craniata, Vortebrata, Euteleostomi;
Mammalia, Eutheria, Cetartlodactyla, Suina, Suidae, Sus.
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MEDLINE-68286485: PubMed-5657063;
Chance R.E., Ellis R.M., Bromer W.W.;
"Portrine profinsulin: characterization and amine acid sequence.";
Science 161:165-167(1968).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FVNQHLCGSHLVEAUYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FVNQHLGGSHIVEALYIVGGERGFFYTPKA-GIVEQCCAGVCSIXQLENYCN 51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 263.5; DB 1; Length 57; Pred. No. 8.2e-26; 1; Mismatches 3; Indels
                                                                                                                                                                                            -i- SUBCELLUIAR LOCATION: Secreted.
-i- SIMILARTIY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY PIR: AC1586; INCT.
BSSP: 101317; IAPH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Han X.G., Tuch B.E.;
"Complete porcine preproinsulin cDNA sequence.";
Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9007B50CDB4E7DDD CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INSULIN A CHAIN.
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1 36 INSULIN B CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-89099318; Pubmed-2905485; Baker E.N., Bundel T.L., Cutfield J.F., Cuttineld S.M., Dodson E.U., Bodson G.G., Growfoot Hodgkin Dim, Hubbard R.E., Isaans N.W., Bodson G.G., Sakabo K., Sakabo N., Vijayao N.M., "The structure of 20m pig insulin crystals at 1.5-A resolution."; Philos. Trans. R. Soc. Loid., B. Biol., Sci. 319:369-456(1998).
                                                                                                                                                                                                                                                    Isaacs N.W., Adarwal R.C.; "Experience with fast Fourier least squares in the refinement of the crystal structure of ricm-obedral 2-zinc instin at 1.5-A resolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WWW-"http://www.expasj.ora/spotlight/articles/sptitous.umml".
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MEDLINE-92126280: PubMed-17726-33:
Balschmidt, P., Hansen P.B., Dodson E., Dodson E., Dodson E., Structure of portrain insula cocrystailized will clupcine 7.
Acta Crystallogr. B 47:975-936(1991).
                                                                                               X-RAY CRYSTALLOGRAPHY (I.) ANGSTROMS).
Blundell T.L. Dodson G.G., Hodckin D., Morcola D.:
"Insulin. The structure to the crystal and its reflection in
chemistry and blology.";
Adv. Protein Chem. 26:279-402(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-91222450; PubMed-2025410;
Badgor J., Harris M.R., Roynoids C.D., Evans A.C., Codson B.,
Bodson G.G., North A.C.F.
"Structure of the piq insulin dimer in the cubic crystal.";
Acta Crystallogr. B 47:122-136(1991).
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1- SIMILARITY: BELONGS TO THE INSUBLINTING MELAXIN FAMILY:
1- DATABASE: NAME-Probeit Spoilight:
NOTE: SSUE 9 Of April 2001.
                                 Chance R.B.;
Submitted (301-1970) to the PIR data back.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X-RAY CBYSTALLOGRAPHY (1.35 ANGSTROMS).
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EMBL, AY044828; AAL69550...; ALS
PDB, SINS, 09-ZAN-89.
PDB, 4 INS; 31-JUL-94.
PDB; GINS; 31-JUL-94.
                                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (1.5 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                          Acta Crystallogr. A 34:782-791(1978).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X-RAY CRYSTALLOGRAPHY
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REVISION TO 59.
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2TCI;
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25 FVNQHECGSHEVEALYEVCGERGFFYTPKARREAENPQAGAVELGGGIGGIQALALECPP 84
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                                                                                                                                   SMART; SM09078: TIGF: 1.
PROSITE: PS00262; IRSULIN: 1.
Insulin family: Hormone: Glucose metabolism; Signal: 3D-structure.
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Mannalia, Eutheria: Lagemorpha, Leporidae, Oryetolagus.
                                                                                                                                                                                                                                                                                                                                                                                                    32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SECUENCE OF 56-110 FROM N.A. Gladings A.J., Carnedings A.J., Carnedin L.R., Devaskar S.U.; Submitted (APR-191) to the EMBL/Genbank/DDEJ databases.
-:- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Devaskar S.U., Giddings S.J., Rajakumar P.A., Carnaghi L.R.,
Menou R.K., Zahm D.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'Species variation in the amino acid sequence of insulin.";
                                                                                                                                                                                                                                                                                                                                                                     Score 263; DB 1; Length 108;
Pred, No. 1.9e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                           1 FVNQHLCGSHLVEALY: NCGERGFFYTPKT -----------
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INSULIN A CHAIN.
INTERCHAIN.
INTERCHAIN.
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21-301-1986 (Rcl. 01, Created)
31-FFB-1996 (Rcl. 33, Last sequence update)
31-0CT-1996 (Rcl. 34, Last annotation update)
                                                                                                                                                                                           INSULEN B CHAIN.
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STRAIN-NOW Zealand white: TISSUE-Pancroas:
MEDLINE-94179230: PubMed-8132571;
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                                                                                                          InterPro; IPR004825; Ins/3GF/relax. Pfam; PF00049; Insulin; 1. SMART; SM00078; IlGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Med. 40:662-665(1966).
                                                                                                                                                                                                                                                                                                                                                                        89.5%;
60.7%;
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29-3AN-96.
29-3AN-96.
16-33N-97.
01-APR-98.
28-FBB-97.
16-FBB-99.
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28-JAN-98.
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                                         |SDB:
|WAV;
|ZEI;
|ZNI;
|ZNI;
               3MTH;
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DISCLETE BONDS.
-!- SUBCELCULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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                                                                                                                                        EMBL: AY038604; AAK72558.1: -.
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59,38;
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des 51; Conser
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                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute or Bioinformatics and the EMSI contaction. The European Bioinformatics Instituted There are no restrictions on its use by non-profit institutions as long as its content is in an modified and this statement is not removed. Usade by and for commencial entities requires a license agreement (See http://www.isb-sin.or/annon-correct send on email to license?isb-sit.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tredrea M.R., Buck M.J., Guhamiyoqi J., Squirc T.L., Andrews M.T.; Tredrea M.R., Buck M.J., Guhamiyoqi J., Squirc T.L., Andrews M.T.; Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.

-!- FUNCITCH: INSULIN BERHARES BLOOD GLUCCSE (SNCENFATION, IT INCREASES CELL PERHABILITY TO MONGSACCHARIDES, ARING ACTES AND PATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PHYTOSE PHOSPHAIR CYCLE, AND GLYCOGAN SYNTHESIS IN LIVER.

-!- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKEL BY TWO
 INCREASES CELL PERMEABILITY TO MONOSACCHAFICES, AMINO ACLUS AND
           PATTY ACIDS. IT ACCELLERIES GLYCOLYSIS, THE PENINSE PHOSPEATE CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER. SUBUNIT: HETERODINER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Spermophilus tridecemlineatus (Thirteen-Lined ground squirrel).
Eukaryota, Metazoa: Cherdara; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Wodestia; Sciurograthi; Sciuridae; Sciurinae;
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                                            DISUTRIDE BONDS.
SURCELLUIAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULN/IGE/BELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
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82D2975B85D77FA8 CRC64;
                                                                                                                                                                                                                                            Pfam: PF50649: Insulin: 1.
PMAXT: SM0079: 1.0FF: 1.
PMOXITE: PF00179: 1.0FF: 1.
Insulin: family: Hormone: Glucose motabolism: Stinal.
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Pred. No. 1.9e-25;
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15-SEP-2003 (Rel. 42, Created)
15-SEP-2003 (Rel. 42, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
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C PEPTIDE.
INSULIN A CHAIN.
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                                                                                                                                                                                                                                                                                                                                                   INTERCHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 ----RGIVECCTSICSLYQLENYON 52
                                                                                                                                                                                 EMBL: UC3610; AAA19033.1; -.
EMBL: M61153; AAA17540.1; -.
PIR: A53438; INPM.
LHSSP: P01308; ITYM.
LnterPro: IPRO04625; InsylGF/relax.
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59,38;
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109
100
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                                                                                                                                                                                                                                                                                                        Cuery Match
Best Local Simi
Matches 51:
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CONFLICT
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the PRBL outstation the European Bloinformatics Institute. There are no restrictions on itse use by non-profit institutions as long as its content is in no way calfiled and this statement is not removed. Usage by and for commercial entities requires a license alreaned (See http://www.isb-sib.ch/announce/cr send an esail to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haliden G., Gafvelin G., Matt V., Joernvall H.;
"Characterization of Cat insulin.";
Arch. Blochem. Blophys. 2720-27(1961).

-i. FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELL PERREABILITY TO MONOSACCHARIDES, AMINO ACIDS AND
FAITY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSPHATE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.

-:- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polis silvestris catus (Cat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -:- SURCELLULAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 263, DB 1; Length III
Pred. No. 1.96-25;
1; Mismatches 6: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INSULIN A CHAIN.
INTERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
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4511768D6622BEES CRC64;
                                                                                                                                                                                                                                                                                                                            HSSP, P01308; LLNP.
LaterPro; IPR054825; Ins/IGF/relax,
Flas; PF00469; Insulin; 1.
PPINTS; PR00577; INSULINB.
SMAKT; SN00078; i1GE; 1.
PROSITE; PS00262; INSULIN; 1.
Insulin family: Formone; Glucose metabolism; Signal.
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01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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INSULIN B CHAIN.
C PEPTIDE.
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J. Biol. Chem. 258:2357-2353(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Canis familiaris (Dog).
Bukaryota: Metazoa; Chordata: Craniata: Vertebrata: Euteloustom:
Marmalia: Buthoria: Carbivora: Pissipedia: Canidae: Canis.
                                                                                                                                                                                                                                                                                                                                                                                                             1 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 52
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                                                                                                                                                                                                                                                                                                   Score 262.5; DB 1; Length 51;
Fred. No. 1.1e-25;
2; Mismatches 2; Indels
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SIMILARITY: RELONGS TO THE INSULTN/TGE/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro: IPR004825; Ins/TuF/relax.
Pfam; PF00049; Insulin; 1.
SMART; SM00678; IldF: 1.
PROSITE: PS60262; IldF: 1.
Insulin family; Hormone; Glucose metabolism; Signal.
SIGNAL 1.
                                                                                                                                                                                                                                                 900735096A0A7000 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-005-1985 (Rel. 01, Created)
21-J05-1986 (Rel. 01, Last Segmence update)
61-FEB-1996 (Rel. 33, Last annotation update)
                                                                                      INSULIN B CHAIN.
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                                                               Hormone: Glucose metabolish
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MEDLINE-66160119: PubMed-5949593:
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31 51
19 50
19 50
36 41
51 AA: 5745 WW. 9
SMART; SM00078; 11GF; 1.
PROSITE; PS00262; INSULN; 1.
Insulin lamily; Hormone; Gluc
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90.4%;
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Best Local Similarity 90.49
Matches 47, Conservative
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HSSP; P01317; 1APH.
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Search completed: September 15, 2003, 12:01:30 Job time : 4.84588 secs

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091231 oncorpyochu
091231 oncorpyochu
09136 oncorpyochu
04236 myoxocephal
P81268 oncorpyochu
091965 oncorpyochu
091943 squalus aca
08)ie4 brachydanic
0815 sualus aca
0815 sua surofa
093380 meleagris q
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098sr6 megalobrama
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Okarywias Metasoa, Chordata, Craniata, Vertebrata, Butelcostomi,
Rammalis, Butheria: Frimates, Catarrhini, Hominidae, Pongo.
NGHIJaxID-9600;
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60.5%; Pred. No. 1e-28;
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Stead J.D.H., Jeffreys A.J.;
Stead J.D.H., Jeffreys A.J.;
Haplotype diversity at the insulin region.";
Submitted JUH-2202) to the EMBI/GenBank/DbJ databases.
BMBL: All3531, AANO6977.1;
SECTION ALL ALLS ANO6977.1;
SECTION ALLS ANO6977.1;
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Last annotation update)
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01-DEC-2001 (TrEMBLrel. 19, Created)
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mes 52; Conservative
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Insulin precursor.
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Q91XI3
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JRHXV2
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Q98tas parcodon on
Q98tas parcodon on
Q95zas catla centa
Q98tas catla centa
Q98tas catla cata
Q98tas cattachemus
Q98tas acattachemus
Q98tas catostomus
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                                                                                                                                                                                                                                          .....tvegccfstcsbyglenygn
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               GenCole version 5.1.5
Copyright (c) 1993 - 2003 - Computer Ltd.
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                                                                                                                                                                                                                                                                                                                                   830525 seqs, 258052604 residues
                                                                                                                           September 15, 2003, 11:54:30
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                                                                                         - protein search, using sw model
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0981A6
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Gapop 16.0 , Gapext 0.5
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1: sp_archea:•
2: sp_bacteria:•
3: sp_fung:•
4: sp_human:•
5: sp_human:•
5: sp_marmal:•
6: sp_marmal:•
7: sp_mic:•
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sp_phage:*
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Maximum DB seq length: 2600066:000
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Mammalia: Butheria; Carnivora: Fissipedia; Felidae, Felis.
                                                                                          Spermophilus tridecemlineatus (Thirteen-lind ground squirvel).
Ebkaryota, Metazoa: Ciordata; Craniata; Vertebrata; Euteleostomi:
Hammalia; Eutheria; Rodentia; Sciuroquathi; Sciuridae; Sciurinae;
Spermophilus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89,5%; Score 263; UR 11, Lenuth 110;
59,3%; Pred, No. 3.6e 26;
170e :: Mismatches 0: indels 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85.4% Score 251 DB 6; Longth 119; 55.8% Pred, No. 1.66-26; Clubels ive 2; Mismatches 2; Indels
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-!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY)
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
INTERPRO: IPRO/0425; INSULIN/IGF/RELAXIN FAMILY.
Interpro: IPRO/0425; INSULIN/IGF/relax.
PF00049; Insulin: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS: PMC0277; INSCLINH.
SMART: SMOOT8; 110F; 1.
PMCSUTE; SOOJ62: INSCLIN: 1.
SEQUENCE: 113 An: 12604 MW; 4511766E5622BEST :MCG4.
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Last arnotation update)
61-DEC-2061 (TrEMBLrel, 19, Last sequence update) 01-MAR-2003 (TrEMBLrel, 23, Last annotation update)
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20.
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SMART; SM00078; ILGF: I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Rest Local Similarity 59.13
Rest Local Similarity
Face 51: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okamoto S., Morimatsu M.; "cat insulin.";
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01-MAR-2002 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam: PF00049: Insulin:
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Matches 48; Conserv
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                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                  NCBI_TaxID-43179;
                                                                                                                                                                                                                                                                                                                   IISSUE-Pancreas:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9685
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24 FONGYICGSHLVEALYMVCGDRGFFYSPRSRRDLEQPLVNGLGGSELDEMQVQSQAFOKR
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Proinsulin cDNAs from the leopard frog. Rana pipiens: evolution of proinsulin processing."
Comp. Biochem. Physiol. 2558:405-410(2000).
SIRCELULAR LYGATION: SERRETED (BY SIMITARITY).
SIRCELULARITY BELONGS TO THE INSULIN/IGF/RELAXIN PAMILY.
EMBL: AFYZZZIS7, AAFR7285.1;
HSSP; P01315; 185B.
                                                                                                                                                                                                                                                                                   Raba piplens (Morthern Leopard frog).
Eskaryota: Metazca: Chordata: Craniata: Vertebrata: Buteleostomi:
Amphibia: Batrachia: Anura: Neobatrachia: Ranoidea; Rabidae: Raba.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pantodon buchholtzi (Butterflyfish).
Eukaryota; Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Osteoglossomorpha;
Csteoglossiformes; Pantodoctidae; Pantodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31;
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Last annotation update)
                                                                                                                                                                                                                           Last sequence update)
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01-00N-2001 (TrEMBLICE) 17, Created)
01-00N-2001 (TrEMBLICE) 17, Last sequent
01-MAR-2003 (TrEMBLICE) 23, Last and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84 KPGIVEQCCHNTCSLYDLENYCN 106
                                                                                                                                                                                                      Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Interpro: [PROGA625, Ins/10F/relax.]
Para: PROGA5; Inslin. J.
PRINTS; PROGA7; INSULINE.
SMART; SMO678; IIGE: 1.
                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
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MEDLINE-20362507; PubMed-10818274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF199588; AAK28712.1; -.
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                                                                                                                                                                                                 01-001-2000 (TrBMBLRel, 15, 01-001-2000 (TrBMBLRel, 15, 01-MAR-2003 (TrBMBLRel, 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Overy Match
Best Local Similarity 49.49
Matches 41; Conservative
                                                                                                                                                         PRELIMINARY;
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SECUENCE 106 AA,
                                                                                                                                                                                                                                                                                                                                                           NCB:_Tax:D-8404:
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31 83 m

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4 QHI.CGSHLVEALYLVCGERGFFYTPK -----T 30
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Actinopteryali, Neopterygii, Feleostei, Ostariophysi, Cypriniformes;
Cyprinidae, Catla,
                                                                                                                                                                                                                                                                                                                                                                    Cáitala chitálá (clown knifefish).
Bukaryota: Metazca: Churdata: Craniata: Vertebrata; Euteleostomi:
Achisopterygii: Neopterygii: Teleostei: Osteoglossomorpha;
Osteoglossiformes; Netopteridae; Chitala.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66.5%; Score 195.5; DB 13; Length 108; 45.1%; Pred. No. 5.8e-19; tive 5; Mismatches 7; Indels 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A Mahrowith A.L. Irwin D.M., Graham L.C., Youson J.H.:
A Mahrowith A.L. Irwin D.M., Graham L.C., Youson J.H.:
MYD-Goular Cloning of preprinted.
Sicoglossomorphs and a cyprintal.
MYD-Goular Cloning of preprintal.
MYD-Goular Cloning of preprint of mydelian replacements and a cyprintal.
MYD-Goular SEGORGS TO THE INSULIN/IGF/HELAXIN FAMILY.
MYD-GOULAR ARA28710.1.
MYD-GOU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE, PS00262; INSULIN: 1.
SEQUENCE 100 Aa; 11861 MW; D713026E22EF5D59 CRC64;
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51-MAR-2003 (IrEMBLrel. 23, Last annotation update)
Preproinsulin (Fragment).
       ol DEC-2001 (TrBMBLTel. 19, Created)
03-DEC-2001 (TrBMBLTel. 19, Last sequence update)
03-MAR-2003 (TrBMBLTel. 23, Last annotation update)
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Matches 37; Conservative
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Matches 38; Conservative
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                                                                                                                                             Catla catla (catla)
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                                                                                                                                                                                                                                                                               NCBI_TaxID-72446;
                                                                                                                Preprofusulin.
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Q987B0;
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              $\\ \text{SOB BENEFIT \\ \text
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Eukaryota: Metazoa: Chordhta: Granlata: Vertebrata: Euteleostori:
Actinopteryqii: Noopteryqii: Teleostei: Ostariophysi: Cypimiformes:
Cyprinidae: Danio.
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                                                                                                                                                                                                        Query Match 68.5%; Score 201.5; LP 1%; Edigin 110.
Best Local Similarity 43.5%; Pred. No. E.36-20;
Matches 57; Conservative 8; Mismatches 5; Indels 55.
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Last annotation update)
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45.1%; Pred, No. 5.80-19;
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INSULIN B CHAIN,
INSULIN A CHAIN,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86 KVKRGIVECCHHPCNIFBLONYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31 --- RGIVEQUEISICS / YOLENYON 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-WAR-2001 (TrEMBLrel, 16, Created)
01-WAR-2001 (TrEMB.rel, 16, Last sequ
01-WAR-2003 (TrEMBLrel, 23, Last anno
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InterPro: IPR04825; Ins/:GE/rulax.
Pfm: FP00349; Insulin: 1.
PR:WTS: PR00247; INSULINS.
SWART: SW00378: ILUE: 1.
InterPro: IPM004625; Ins/ISF/relax
Perm: PR0649; Institut 1
SMARD: SW0078: Insp: I
PROSITE: PSC6262: INSULIN I
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66 ID8 II
108 AA: 11904 MW:
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                                                                                                                                     110 AA;
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Matches 37: Conserv
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0902N4;
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CHAIN
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Q90ZN4
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MOI. Cell. Endocrinol. 174:51-58(2001).
-! SUBCELLCLAR LOCATION: SECRETED (BY SIMILARITY).
-! SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
EMBL. AF195389 AAK28713.1; -.
HSSP, P01315; IMPI.
InterPro: IPR004825; INS/IGF/relax.
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Ffam; PF0C049; Insulin; 1.
SMART; SMC0078; IIGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEGUENCE FROM N.A. MEDLINE-2120517:
                                                                                                                                                                                Prints, PROCO49: Insuling a Prints, PRINTS, PROCO77; INSULINB. SMART; SMOO078: 11GF: 1.
PROSITE: PSOCO52: 11GUIN: 1.
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Best Local Similarity 42.55
Fee 36: Conservative
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2002 (TrEMBLrel. 10, Last annotation update)
Preproinsulin (Fragment).
Osteoglossum bicirrhosum (silver arawana).
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Enteleostomi: Actinopterygii: Neopterygii: Teleostei: Osteoglossumorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hiodor alosoides (goldeye).
Bakaryota, Metazdar Chorden, Crantara, Vertetrara, E. Ledeszterra,
Actinoptorychi, Neopterrydi), Televastei, Geteoglossiformos
Osteoglossiformos, Hiodominiae, Hoodon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.8%: Score 193.5; DR 13: Lonath 110: 42.4%; Fred. No. 1.1e-19; Live 7; Mismatches 7; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P SEQUENCE FROM N.A.

X MEDIZEE-21203-77; Pubmod-11306171;

M. MEDIZEE-21203-77; Pubmod-11306171;

T. Mal-mahrouxi A.A., Irwin D.M., Graham L.C., Youson J.H., Orsteeplos and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid," Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid, "Second ossemorphs and a cyptrinid, "Second ossemorphs and "Second ossemorphs" and "Second osse
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Al-Mahrouki A.A., Irwin D.M., Sraham L.C., Youson J.H.,
"Molecular coning of preproinsulin coNAs from several
osteoglossomorphs and a cyptrinid."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110 AA: 12343 WW, BDECCD7703852806 ORC64;
                                                                                                                                                                                                                                                                                                                                                                                                    61-DEC-2001 (TrEMBirel, 19, Created)
01-DEC-2091 (TrEMBirel, 19, Last sequence update)
01-MAR-2093 (TrEMBirel, 23, Last annotation update)
Preprogramment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Osteoglossiformes: Osteoglossidae: Osteoglossum.
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3 NOHLOGSHI, VEALY LVCGERGFFYTPK - - - -
                                                                                                                                                                                       VKMKRGIVEQCCHRPCNLFDQNQYCN 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HIIIIII :::: HII
86 KVKRGIVEQCCHRPCNIFDLNGYCN 110
                                                                                                                            30 --- TRGIVEOCCTSICSLYOLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31 --- RGIVEQCCTSICSLYOLENYCN 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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Matches 36; Conservative
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Q902Y1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Actinopteryqii: Neopteryqii; Teleostel; Osteoglossomorpha;
Osteoglossiformes; Mormyridae; Gnathonemus.
                                                                                                                                             35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35;
                                                                               Ouery Match 65.1%; Score 191.5; DB 13; Length 111; Best Local Similarity 41.2%; Pred. No. 2.1e-18; Matches 35; Conservative 10; Mismatches 5; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13; Length 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Al-Maircuki A.A., Irwin D.M., Graham L.C., Youson J.H.;
"Molecular clonking of preproinsulin cDNAs from several
osteoglossomorphs and a cyptinid.";
MOI. Call. Endocrinol. 174:51-58(2001).
-:- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
FMBL; ARIBOSAF, AAK28711.1;
--- FMBL; ARIBOSAF, AAK28711.1;
HSSP; F01308: 1HIS.
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42.9%; Pred. No. 5.8e-18;
wismatches 8; Indels
NON_2SR 111 111
SEQUENCE 111 AA: 12491 MW, AC9E19D2D4866D2U CRC64;
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0987A9.
1-374-2001 (TEMBLEOL 17, Created)
71-378-2001 (TEMBLEOL 17, Last sequence update)
71-378-2003 (TEMBLEOL 23, Last anotation update)
81-980-0000 (TEMBLEOL 23, Last anotation update)
81-980-00000 (TEMBLEOL 23, Last anotation update)
81-980-000000 (TEMBLEOL 23, Last anotation update)
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Gaps

39;

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SECUENCE FROM N.A.
O'hUigin C., Tichy H., Klein J.;
Molecular evolution in higher primates: gene specific and organism specific characteristics.";
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C'INIGAIN C., TICHY H., Klein J.;
C'INIGAIN C., TICHY H., Klein J.;
Wholecular coccention in higher primates; gene specific and organism specific characteristics.";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL. AY092024; AAM75641.1; -..
NON_TER 65 65
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Mammalia; Butharia; Primates, Catarrhini; Hominidae, Gorilla.
NCBI_TaxID-9593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pundo pygmaeus (Orangutan).
Bukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Pongo.
                                  Length 91:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 6: Length 65:
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                                                                                                                                              Indels
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61-MAR-2003 (TrEMBLrel, 23, Last sequence update)
61-MAR-2003 (TrEMBLrel, 23, Last annotation update)
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01-MAR-2003 (TrEMHirel. 23, Last sequence update)
01-MAR-2003 (TrEMHirel. 23, Last annotation update)
                                  DB 13;
Score 185.5: DB 13;
Pred. No. 1.16-17;
Pred. No. 1.16-17;
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                                                                                                                                                                                                                                                           4 OBLOGSHLVEALYLVCGERGFFYTPK-----
                                                                                                                                         5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64 MEMMVRRGIVEOCHEPCITE | 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30 ----IRGIVEQUOTSICSLYOLENYON 52
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                                  64,28;
40,98;
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                                                                                                                                              #6; Conservative
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hes 31, Conservative
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Fost Local Similarity
Marches (6) Conserv
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SEQUENCE
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CatoStomus commersori (White sucker).
Eukaryota; Matazoa: Chordata; Craniata; Vortebrata: Euteleostomi,
Actinopterygii, Neopterygii; Teleostai: Ostariophysi; Opprintormes:
CatoStomidae; CatoStomus.
NCBL_TaxID=7971;
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Ambioplites rupestris (Sock bass).
Bularyots Mctazoa: Chordata: Gramiuta; Verretrata: Externestricin Actinopterygii: Neopterygii: Teleostei: Esternestei: Neopterygii: Acanthoperygii: Percomonpus Acanthoperygii: Percomonpus; Pe
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Alwarbor's A.A., ITWIN L.M., TOBSON S.B.:
"Moietual clopino pre-moinsule clwa :com t.a. cock bass.
Submitted (OTT-1979) to tre EMBL/GenBank/Dhm. databases.
-: SUBCELUGIAR LOCATION: SECRETE, (BY SIMILARITY)
EMBL: ARBIGARITY: BRIONGS TO THE INSULIN/IGF/HELAXIN FAMILY
EMBL: ARBIGARITY BRIONG
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                                                                                                                                   01-JUN-2001 (Tremmirel, 17, Greated)
01-JGN-2001 (Fremmirel, 17, Last sequence update)
01-MAR-2003 (Fremmirel, 23, Last annotation update)
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01-00N-2001 (TrBMHLTC), 17, East sequence update)
01-MAR-2003 (TrBMHLTC), 23, Last ambiation update)
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Pfam: PF30049; Ins.lin; 1.
SMART; SM06078; I.GF; 1.
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Best Local Similarity
Matches 36: Conserv
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Gaps

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Qy 7 CGSHLVPALYLVGSRGFFYTPKT	SPFYTPKT				
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	1 COSHLVBALYIVCGERGEFYTPKTREGAEDLOVOQVELAGGEGGGGGGGGLUFLALEGSIUGGGG	GGGPGAGSLU	CALEG	51 UK KG - 6	<b>(7</b> :
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Genfore version 5.1.6
Capyright (c) 1993 - 2003 - Compuges
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using sw model protein search, OM protein

Run on:

US-09-423-100-6 587 Title: Perfect score:

1 MEPTIFISRIFONAMIRAHR. Sequence:

...IVEQUOTSIOSLYGLENYCN 10?

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

1107863 seqs, 158726573 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seg leugth: 0 Maximum DB seg length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

•• Database

4. STDS Lyggdata / genesety / emb. / Ant. 94 2. DAT 1.
5. STDS Lyggdata / genesety / emb. / Ant. 94 3. DAT 1.
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Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score listribution.

### SUMMARIES

587	Query Match 100.0	Ouery Match Length DB	26 26	- 5 · 1	Description
555.5			2.0	AAY42861	Chimer: protein.
315.5			13	AAR98897	SOP-prolitikalization
304			5:	AAR68300	Baman pro-instlin
304		117	1.7	AAR98896	SCO-projesting not
302.5			9	AAR71692	Mating factor alph
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299		96	ľ	AARARAGG	a chemical against

Fusion protein con	Mating	Mating factor al	Human ii	Pro	613	EXS	Pre	Nd	DOM.	Modified pJB59 mod	N-1	. Am i	EEAEPK-MI3 ins		pAK855 proteir		Insulin pre	EEAEPK-MIS	Amino	S. cerevisiae	Mating factor	2.	Di-Arg-(B31-3	Insl dou	Protein seg	A Bacillu	Amino aci	EEAEPK	Human proj	Amino	Human preproin	Signal	Yeast signal/lea	q papoone encoded p
AAR78662	AAR71694	69	AAY42859	<b>\$58</b>	7905	1:89	36	90,	504	AAR96048	18	AAP94645	324	16	75	3257	5	24	54	88	69	69	AAR65883	0	2	7.0	AAP94644	AAW19241	AAP20002	AAP94648	AAY53589	AAP94649	AAR71684	AAP71019
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#### AL, CUMENTS

hdH-mini-proinsulin chimeric protein. AA AAY42860 standard; protein; 107 19-JAN-2000 (first entry) AAY42860; RESULT 1 AAY42860

Insulin, precursor, growth hormone, chaperone, intramolecular; folding, conformation, chimeric protein, cleavable, recombinant, production, gield. 

Hope sapiens Synthetic

W09950302-A1

98WO-CN00052. 31-MAR-1998; 07 OCT-1999.

(TONG-) TONGBUA GANTECH BIOTECHNOLOGY LID. 98WO-CN00052 41-MAR-1998;

Gan 2;

WFI: 1999-610839/52

New chimeric proteins containing human growth hormone fragment, used

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FESULT 3
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                                                 This sequence represents a chimeric protein, MGH-mini-profinsulin.
This chimmeric protein contains an N-terminal fraquent of human growth hormone (MGH) of the sequence given in AAV42865, a Heuvable peptide linker (AAV42867), and a human insulin precursor comprising insulin A and B chains (AAV42859). The hGH portion of the chimeric protein acts as an intramolecular chapterone (LMC) for the insulin precursor, enabling it to fold correctly. The cleavable peptide linker has a C-terminal Arg residue which enables the hGH portion of the chimeric protein to be removed after folding has taken place. Production
                                                                                                                                                                                                                                                            the fusion proteins, thus allowing folding or the fused insultn previous at commercially useful high concentrations. The procedural steps of
                                                                                                                                                                  of recombinant human insulin via an hoH proinsulin chimeric protein can provide human insulin with correctly linked cysteine bridges with fewer necessary procedural steps, and hence resulting in a higher yield of human insulin. The IMC sequences not only protect insulin sequences from intracellular decradation by a micrororganism host, but also provide the folding of the fused insulin precision: facilitate the solubility of the fused insulin precision. Additional amounts the fusion protein and decrease the intermedicular interactions among
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEPTIPLSRUFDNAMLRAHRLHOLAFDIYORFERAYIFKEOKYSFLONPLGIGFRFYNUR (1
                                                                                                                                                                                                                                                                                      cyanogen bromide cleavame, oxidative suiphitriysis and related purification steps can thus be eliminated, a can with the use of blah concentrations of mercaptan or the use of hedropholic absorbent essins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New chimeric proteins containing homan growth horsone fragmont, used
                                                                                                                                                                                                                                                                          the procedural steps of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Insulin; precursor; growth hormone; chaperone; intramolecular; folding; conformation; chimeric protein; cleavable; recombinant;
                                                                                                                                                                                                                                                                                                                                                                 100.0%: Score 597; 08.20: Length 107:
100.0%: Pred. No. 46-42;
Live 0; Mismatches 10: Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 LCGSHLVEALYLVCGERGFFYTPKTRGIVEGCCTSICSLYGLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
 particularly for the production of human insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY42861 standard; protein: 150 AA.
                          Claim 13; Page 30; 46pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric protein, SEQ 10 7.
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                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
Hes 107; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-610839/52
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                                                                                                                                                                                                                                                                                                                                          107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
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Matches
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This sequence represents a chimeric protein, which contains an N-terminal fragment of human growth hormone (NGH) of the sequence given in AAX4886, a cleavable peptide linker (AAX4885), and a human insulin precursor comprising insulin A and B chains (AAX4885). The HoH portion of the chimeric protein acts as an intramplecular chaperone (IMC) for the chimeric protein acts as an intramplecular chaperone (IMC) for the chimeric protein acts as an intramplecular chaperone (IMC) for the chimeric protein at a C-terminal Arg residue which enables the hGH portion of the chimeric protein to be removed after folding has taken place. Production of recombinant human insulin vith correctly linked cysteine bridges with fewer necessary procedural steps, and hence resulting in a higher preduces from intracellular degradation by a microorganism host, but also promote the folding of the fused insulin precursor, facilitate the solubility of the fusion protein and decrease the intermolecular.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   interactions among the fusion proteins, thus allowing folding of the fiscal insulin precursor at commercially useful high concentrations. The procedural steps of expanges normide cleavage, oxidative sulphitolysis and related purification steps can thus be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobic absorbent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 20; Length 150;
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particularly for the production of human insulin
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71.3%; Pred. No. 2.4e-39;
ive 0; Mismatches C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 GFFYTPKTRGIV50CCTSICSLYQLENYCN 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78 GFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BICT-) BIO-TECHNOLOGY GENERAL CORP.
                                                                 Claim 14: Page 30-31; 46pp; English.
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95ZA-0000142.
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us-09-423-100-6.rag

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with a receaptan to provide 2-10 SH residues per Cys residue, in processed of a charterpic agent and in aq. medium of pH 10-11.

Treating the proof with 3-50 g hydrophobic adsorber resin per 1 aq. creating the proof with 3-50 g hydrophobic adsorber resin per 3 aq. creating the proof with 3-50 g hydrophobic adsorber resin per 3 aq. correctly bonded Cys bridges. Compared with Known methods in the correctly bonded Cys bridges. Compared with Known methods in the correctly bonded Cys bridges. Compared with Known methods in the process is quicker and gives better yields.

Che process is quicker and gives better yields.

Sequences of insulin chain A, B and C are given in AAR68898-97.

Sequences of insulin A, H are given in AAR68898-901.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51 GTGPRFVNQHLGGSHLVEALYLVGGRRGFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    comprises folding a hybrid polypeptide comprising proinsulin under conditions that permit correct disulphide bond formation and subjecting that folded protein to enzymatic cleavage. The insulin produced can then be purified. This sequence is a SOD-insulin B chain-Lys-Arg-insulin A chain hybrid polypeptide and is encoded by the plasmid construct pBAST-R. Transformation of the proper E.coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Recombinant insuling prodot by correctly folding profinsulin hybrid polypeptide - then enzymatic cleavage of folded product, does not require sulphite protection of SH nor use of cyanogen bromide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 304; DB 15; Length 63;
Pred. No. 1.3e-18;
0; Mismatches 3: Indels
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                                                   Disclosure: Page îl-12: 15pp: German.
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952A-C000142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
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                                                                                                                                                                                                                          A new method for the production of recontingnt human maritim comprises folding a hybrid polypeptide comprising profisuling conditions that permit correct dishulphide bond formation and subjecting that permit correct dishulphide bond formation and produced can them be purified. This sequence is a SCD-insuling produced can them be purified. This sequence is a SCD-insuling produced can them be purified. This sequence is a SCD-insuling the plasmid construct poBASY-LAT. Transformation of the profisuling hybrid polypeptide and is encoded by E.coli host cells with pDBAST-LAT results in the efficient expression of the profisuling hybrid polypeptide, wastell for human insuling production. The method produces recombinant human insuling identical to the natural hommore. Hazardous and cumbersome
                                                                            Recombinant insattin productly correctly folding profiting the board polypeptide - then enzyration disavage of folded predict, does not require sulphite protection of SB not use of eyanosen browide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   procedures involving cyanogen bromide and suiphitolysis to protect SH groups are avoided since the entire hybrid polypoptide folds efficiently to the native structure even with the leader attached
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53.7%: Score 315.5; DB-17; Length 116: 85.3%; Pred. No. 2.5e*19; tive 2; Mismatches 5; indexs 3:
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mercaptan; chaotropic agent.
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                                                                                                                                                                                 Example 18: Figure 7: 69pp: English
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Les 58, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Cys unprofected.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human pro-insulin 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI: 1994-177718/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (FARH ) HOECEST AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ludwig J,
WPI: 1996-335766/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    116 AA;
                              N-PSDB; AAT34670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-NCV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP600372-AL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C2-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR68900;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerl M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR69905

IID AAR6

AAC AAC AAR6

XXX Z5-K

DJ C2-K

XXX DT-C2-K

XXX PT-C-C

XXX M MERC

XXX M MERC

XXX DT-C

YXX DT-C

YXX C2-K

YXX C2-K

YXX C2-K

YXX C2-C

XXX XX C2-C

XX XX XX C2-C

XX XX XX C2-C

XX XX XX C2-C

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A20/B19. The derivative, which may be present as a zinc ion complex, can be used as a fast action treatment for diabetes (Updated on 25-MAR-2003 to correct PN field.)
                                                                                    4; Mismatches
                                                              Score 302.5;
Pred. No. 3.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sabel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure, Page 12: 15pp; German.
                                                                                                                                                                                       Obermeier R,
                                                              51.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        93EP-0118993
                                                                                                                                                                                                                                                               AAR68901 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92DE-4240420
                                                                                                                                                                                                                                                                                                         (updated)
(first entry)
                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                       Human pro-insulin 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1994-177713/22.
                                                                       Local Similarity
es 70; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ludwig J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FARE ) HOECHST AG
                                           137 AA;
                                                                                                                                                                                                                                                                                                                                                                                            Home sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-NOV-1993:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-DEC-1992;
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02-MAR - 1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prodn. of
                                                                                                                                                                                                                                                                                    AAR68301;
                                           Sequence
                                                            Unery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gerl M,
                                                                                    Matches
                                                                                                                                                                                                                                            RESULT 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAQB6425 eucodes AAR71692 mating factor alpha Finsulin precused Argb31. ArgB31 comprises the B and A chains of a claimed buraninsulin derivative. In the final claimed compro. they are covalently connected via disulphide honds between Cys residues AVAR7 and
host cells with pBAST-R results in the efficient expression of the profuscing in fybrid polypeptide, useful for buran insulin production. The method produces recombined than insulin industried to the matural hormone. Hazardous and cumbersome procedures involving ratural hormone. Hazardous and cumbersome procedures involving standard and sulfahitolysis to protect SH groups are avoided since the entire hybrid polypeptide folds efficiently to the native structure even with the loader altached and Tys unprotected.
                                                                                                                            -.r
                                                                                                       Length 117;
                                                                                                                                                                                                                                                                                                                                                       Human insulin precursor ArgB31: diabetes: Zinc fon complex.
mating factor alpha 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            insulin deriv. Which may be present as a Zinc for is used to treat diabetes and is tapid acting.
                                                                                                                           5: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jonassen
                                                                                                      51.8%; Score 304; DB 17;
82.6%; Pred, No. 2.3e-18;
                                                                                                                                                                                                                                                                                                                                       Mating factor alpha 1-Insulin precursor Arqual.
                                                                                                                                                                                                                                                                                                                                                                                                                                   /label- mating factor alpha-1
                                                                                                                          3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haveland S.
                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
1..85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 5: Page 78: 100pp: English.
                                                                                                                                                                                                                                                               AAR71692 standard: Protein: 157 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                              cell Broheim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /labe. - Archain
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94US-0190823.
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                                                                                                                                                                                                                                                                                                         (updated)
(first cetry)
                                                                                                                 Best Local Similarity 82.6
Matches 57: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          86..116
Zlabel: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NOVC ) NOVG-NORDISK AS.
                                                                                                                                                                                      DYOLENYON 107
                                                                                                                                                                                                    109 EYOLENYON 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-131314/17.
N-PSDB; AA086425.
                                                                                 117 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W09507931-AT
                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-SEP-1994;
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20-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Anderse: AS,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Markusser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Acylated
                                                                                    Sequence
                                                                                                                                                                                                                                                                                   AAR71692:
                                                                                                       Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complex
                                                                                                                                                                                                                                                                                                                                                                                                                        Protein
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ID AAR7
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:8 STNNGLLFINTTIASIAAKEEGVSMAKREVNQHLCGSHLVEALYLVCGERGFFYTPKTRG 117
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                                                                                                                                                                                                                                                                                                            87
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C cleavage) and overail losses during purification are reduced, i.e. the process is quicker and gives better yields.

C Sequences of insulin chain A, B and C are given in AAR68898-901.

C (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                              3 FPS1----FIAVLFAASSALAAPVNTTTEDETAQIPAEAVIGYSDLEGDFDVAVLPFSN
                                                                                                                                                                                                                                                                                                            49 PLGTG--------PRFVNOHLCGSHLVEALYLVCGERGFFYTPKTRG
                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treating recombinant precursor protein with morcaptan in alkali
and in presence of Chaotropic agent, then isolation on
hydrophobic resin
                                                                          39;
    Length 137;
                                                                                                                                                2 FPTIPLSRLFUNAMLRAHRLHQLAFDTYQEFEEAYIPKEU--KYSFLQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pro-insulin with correct dissulphide bridges -
                                                                          27; Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Frommaulin: A-chain: P-chain; C-chain; disulphide;
mercaptan; chaotropic agent.
DB 16;
                                     3.6e-18;
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bridges. Reaction with trypsin and opt. carboxypeptidase B yields correctly folded insulin. The insulin is isolated by absortion on a hydrophobic resin.
                                                                                                                                                                                                                                                                                                                                                                         Sabel
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diselesure: Page 11/ 15pp/ German.
                                                                                                                                                       AAR68899 standard: poptide; 96 AA
                                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                         Obermeler
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                                                                                                                                                                                                                                                                                                                                     92DE-424C420
                                                                                                                                                                                                   (tirst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Guery Match
Rest Local Similarity 100.
Matches 53; Conservative
                                                                        53; Conservative
                                                                                                                                                                                          (updated)
                                                                                                                                                                                                                     Human pro-insulin 2.
                                                                                                                                                                                                                                                                                                                                                                         Serl M, Ludwig J,
                                                                                                                                                                                                                                                                                                                                                                                          WP1: 1994-177718/22
                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                       (FARE ) HOECHST AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                       hydrophobic resin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96 AA;
                                    56 AA:
                                                                                                                                                                                                                                                                 Home sapiens
                                                                                                                                                                                                                                                                                                                    25-NCV-1993;
                                                                                                                                                                                                                                                                                                                                      02-bec-1992;
                                                                                                                                                                                         25-MAR-2003
02-MAR-1995
                                                                                                                                                                                                                                                                                 EP600372-A1
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                                                                                                                                                                        AAR688997
                                     aprombby:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                      Guerg Match
Hest Local
                                                                        Marches
                                                                                                                                    RESULT 9
AARE4899
 88838
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                                                                                                                                                               <u></u>
                                           <u>3.</u>
7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolation of insulin that is correctly post translationally processed - by reacting preciming with a mercaptam in the presence of a chaotropic agent and purifien, after absorption to hydrophobic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proinsuling post-translational modifications recombinant productions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from human or other insulin. The proinsulin malvenie (produced in recombinant E.coli) is reacted with mercaptan at a ratio of 2.19 SH residues of mercaptan per cys residue of proinsulin. The reaction takes place in the presence of a chaotropic auxiliary agent at pH 10-11 and results in proinsulin with correctly linked cystine.
                                                            55 REVNOHIOGSHIJVEALYIJVGGBRGFFYTEKTRGIVEGGGTGTGSLYGTENYGN 1 7
                                                                      ::
                          Lenath 56;
                                                                                                                                                                                                                                                                        "a poptide of 4 amino acids"
                          Spore 299: DR 15,
Pred. No. 3.2er18;
                                                                                                                                                                                                                                                                                                  /sote= "human issulin B-chals"
                                                                                                                                                                                                                                                                                                                           36..56
/label- Gly-(A2-A20)-R3
/note= "human insulin A-chain"
                              DOLON
100.0%: Pred. wo.
the O; Mishaliches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sabbl W;
                                                                                                                                                                                                                                                                                         /label- R1-(B2-B29)
                                                                                                                                                                                                                                              Location/Owalifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 2: Page 13: 16pp: (erman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chermeier E.
                                                                                                                          AAR78665 standard: protein: 56
                                                                                                                                                                                                          protein folding; conformation.
                                                                                                                                                                                                                                                                                                                                                                                                   95EP-0101748
                          50.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                   94DE-4405179
                                                                                                                                                                                                                                                               /labe:- R2
                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                   /labe!= X
                                            Conservative
                                                                                                                                                                                                                                                                         /note:
                                                                                                                                                                               Proinsulin sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1995-284754/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sudwig J,
                                                                                                                                                                                                                                                                                                                                                                                                                                     (FARH ) HURCHST AG.
                                   Similarity
         Ž
         c.
                                                                                                                                                                                                                                                                                                                                                                                                  39-FEB-1995:
                                                                                                                                                                                                                                                                                                                                                                                                                    18-FEB-1994:
                                                                                                                                                             03-APR-1996
                         Ouery Match
Best Local Simi
Matches 53;
                                                                                                                                                                                                                                                                                                                                                              EP668292-A2
                                                                                                                                                                                                                                                                                                                                                                                23-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 processed
                                                                                                                                                                                                                           Synthetic
         Seguence
                                                                                                                                            AAR78665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Geri M,
                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                           Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Promisulin is produced by treating recombinant precursor protein with a mercaptan to provide 2-10 SH residues per Cys residue, in presence of a chactropic agent and in act medium of pH 10-11, treating the produce produce for a chactropic agent and in act medium of pH 4-7, isolating the adsorber resin and promisation and desorbing the pro-insulin. This method produces promisation and desorbing the pro-insulin. This method produces promisation and desorbing the pro-insulin. This method produces promisation and corectly bonded cys bridges. Compared with known methods in involves fewer stades (sep. no sulphitclysis or cyanogen bromide of the process is quicker and gives better yields. Sequences of insulin chain A and C are given in AAR68898-901. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                            55 REVNOHLOGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55 REVNOHICGSHLVEALYLVCGERGFFYTPKTRGIVEQUOISICSLYQLENYCN 107
                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Produced pro-insula with correct dissulphide bridges - by treating recombinant precursor protein with mercaptan in alkalicant in presence of chaotiopic agent, then isolation on
                                                                                      Ġ
                                                                                                                                                                               4 REVNOHIGGSHIJVEALYLVGGERGFFYTPKTRGIVEGGTSIGSLYQLENYCH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                  Indels
                      Leng: h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Provinsultu; A-chain; B-chain; C-chain; disulphide; mercaptan; chaotropic agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50.9%; Score 299; DB 15;
100.0%; Pred. No. 5.1e-18;
ive 0; Mismatches 0;
                                                                                      Ċ
                      Score 259; DB 16;
Pred. No. 3.2e-18;
50.5%; Scor.
100.0%; Pred. No. c.
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
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100.0%; Pred. No. 5.1e-18;

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which contains an example of a profession molecule correspond to the general formula R2-R1. (B2-B29)-TX-G1y-(A2-A20)-R3 (11). In formula (11), X = Lys. Arg or a peptide of 2-55 amino acids contactive or Arg at the N- and C-reminity T + a natural amino acid; R1 = C Phe or a bond; R2 = H, Arg. Lys. a peptide of 2-45 amino acids Contg. Arg or Lys at the N- and C-terminity R + a natural amino acid; (A2-A20) and (B2-B29) are the insulin A- and B-chain sequence acid; (A2-A20) and (B2-B29) are the insulin A- and B-chain sequence from humar or other Insulin. The profusulin molecule, released by cyanogen bromide, is reacted with mercaptan at a ratio of 2-10 Sin residues of mercaptan per Cys residue of profusulin. The reaction: C takes place in the presence of a chaotropic auxiliary agent at PH 10-11 and results. In precisulin with correctly linked cystine or bridges. Reaction with trypsin and opti. Carboxyperiadase B yields or bridges.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       isolation of inspire that is correctly post-translationally processed - by reacting pro-insulis with a mercaptam in the prosence of a chaotropic agent and purifice, after absorption to hydrophopic
                                                                                                                                                                                        Proinsulin; post-translational modification; recombinant production: protein folding; conformation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present sequence is that of a fusion protein, produced in E.coll
"a peptide of 4 amino acids"
                                                                                                                                                                                                                                                                                                                                                       B-whain"
                                                                                                                                                                                                                                                                                                                                                                                                                       /note- "numman instilin A-effain
                                                                                                                                                                     Fusion protein contg. proinsulin sequence
                                                                                                                                                                                                                                                                                                                                                                                                         /labelw 01y (A2-A20) - RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sabel
                                                                                                                                                                                                                                                                                                                                       /label= R1-[B2-B29)-Y
/sote= "human instlin
                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 2; Page 8: 15pp; German.
                                                                                   96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Obernelor
                                                                                 AAR78662 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9589-0101748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94DE-4405179
                                                                                                                                                                                                                                                                                   41..44
/label- R2
                                                                                                                                          (irrst entry)
                                                                                                                                                                                                                                                                                                                                                                                 /label- x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI: 1995-284754/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              correctly folded ins
a hydrophobic resim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ludwig J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (FARH ) HOECHST AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-FEB-1994;
                                                                                                                                          03-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP668292-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 - AUG - 1995
                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       processed
of a chaot
              44
                                                                                                              AAR78662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
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                                                                                                                                                                                                                                                                                                                           Peptide
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                                                                                                                                                                                                                                                                       Key
Region
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                                                                     AAR78662
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Score 299; DB 15; Length 94;

50.9%;

Query Match

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               Gabs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAQ86429 encodes AAR71694 mating factor alpha 1-Insulin precursor ArgB1. ArgB1N-terminal EEAEAEAR. The insulin precursor comprises the H and A chains of a claimed human insulin derivative preceded by the N-terminal amino acids EEAEAEAR. In the final claimed compsnithey are covalently connected via disulphide honds between Cysresidues A7/B7 and A20/B19. The derivative, which may be present as a zinc ion complex, can be used as a fast action treatment for diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         55 REVNOHLOGSHLVEALYLVCGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                         precursor Arg31, Arg831; diabetes; Zinc ion complex; alpha 1; N-terminal EEAEAEAR.
                                                   44 REVNQHLGGSHLVBALYLVCGERGFFYTPKTRGLVEQCCISICSLYQLENYCN 96
                                                                                                                                                                                                                   Wating factor alpha 1-Insulin precursor ArgB1, ArgB31 N-terminal.
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:
                                       55 REVNOHIGGSHLVEALYLVGGERGFFYTPKTRGTVEQCCTSIGSLYQLENYCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ္ပဲ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acylated insulin deriv, which may be present as a line ion complex - is used to treat diabetes and is rapid acting.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
              :ndels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     299; DB 16; I
No. 7.3e-18;
matches 0;
                                                                                                                                                                                                                                                                                                                              abel - mating factor alpha-l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 299; DB; Pred. No. 7.3e
              0; Mismatches
                                                                                                                                                                                                                                                                                                                                           86..93
/label- N-terminal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Havelund S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 5; Pages 82-83; 100pp; English.
                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                            AAR71694 standard; Protein; 145 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.9%; Sco.
100.0%; Pro
                                                                                                                                                                                                                                                                                                                                                                               /label- B-chain
                                                                                                                                                                                                                                                                                                                                                                                           125..149
/label- A-chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93DK-0001044.
94US-0190829.
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                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gwery Match
Best Local Similarity 100.
Matches 53, Conservative
Best Local Similarity 100.
Matches 53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (NOVC ) NOVO-NORDISK AS
                                                                                                                                                                              (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI: 1995-131314/17.
N-PSDB: AA086429.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145 AA;
                                                                                                                                                                                                                                         Human insulin
mating factor
                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Andersen AS,
                                                                                                                                                                                                                                                                                                                                                                                                                                MD9507931-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Z-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Markussen J;
                                                                                                                                                                              25-MAR-2003
                                                                                                                                                                                         20-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-MAX-1995
                                                                                                                                                  AAR71694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                        Key
Frotein
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AAY42659 standard: protein; 52 AA.

RESULT 13

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AAY42951

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ArgBl. AraBl N-terminal EBASARABN. The insulin precursor comprises the B and A chains of a chalmed human insulin derivative for co-ned by the N-terminal amino acids REABASHR. In the final claimed roughs they are covalently connected via disulphide bends between Cystresidues A7/B7 and A82/H19. The derivative, which may be present as a zinc ion complex, can be used as a fast action treatment for diabetes.
                                                                                                                                 Human insulin precusor Argil, ArgH31; dinetes; Zine to, conquex; mating factor alpha 1; Neterminal EEAEASAFR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAO86432 encodes AAR71695 matting ractor alpha 1-finsilin precursor
                                                                                                          Mating factor alpha 1-Insplin precursor Argsl, Aras31 N-terminal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acylated insulin deliv, which may be present as a Zinc ton complex - is used to treat diabetes and is tapla acting.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jonassen I;
                                                                                                                                                                                                                      mating factor alphasi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                 86..94
//abel- N-terminal peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Have und S,
                                                                                                                                                                                             Socation/Qualitiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 6: Page 85, 100pp; English.
                       AAR71695 standard; Protein; 146 AA
                                                                                                                                                                                                                                                                     /label* B-chain
                                                                                                                                                                                                                                                                                            /label- A-chain
                                                                                                                                                                                                                                                                                                                                                                                                       94CS-0190829
                                                                                                                                                                                                                                                                                                                                                                    94WO-DK00347
                                                                                                                                                                                                                                                                                                                                                                                           93DK-0001044
                                                                                    (tirst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Halstrom JB,
                                                                                                                                                                                                                                                                                  146
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Tabei
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                                                                         (updated)
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N-PSDB; AAQ86432.
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                                                                                                                                                                                                                                                                                                                     WO9507931-A1.
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Markussen J;
                                                                                                                                                                        Home sapiens
                                                                                                                                                                                                                                                                                                                                                                   16-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                       02-FEB-1994;
                                                                      25-MAR-2003
20-NOV-1995
                                                                                                                                                                                                                                                                                                                                             23-MAR-1995
                                              AAR71695;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                          Protein
                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                 Peptide
RESULT 12
AAR71695
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This sequence represents a human insulin precursor comprising insulin A and B chains. This insulin precursor is a component of the chimeric proteins hold-mini-proinsulin (AAY42860) and the chimeric protein and a cleavable performent of human growth hormone (hGH) and a cleavable peptide linker (AAY42857). The hGH portion of the chimeric protein acts as an intranslecular chaperone (hGM) for the insulin precursor, enabling it to fold correctly. The hGH portion of the chimeric protein acts as an intranslecular chaperone (hGM) for the insulin precursor, enabling it to fold correctly. The cleavable peptide linker has a climeric protein to be removed after folding has taken place. Production of the chimeric protein with correctly linked cysteine bridges with fewer necessary procedural steps, and hence resulting in a higher yield of human insulin with correctly linked cysteine bridges with fewer necessary procedural steps, and hence resulting in a higher yield of human insulin. The IMC sequences not only protect insulin sequences from intraccludar adjusted insulin precursor, facilitate the solubility of the tased insulin precursor, facilitate the solubility of the fusion protein and decrease the intermolecular interactions among the fusion protein, thus allowing folding of the fused insulin precursor at commercially useful high concentrations. The procedural steps of cyandeen bronder bronder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New chimeric proteins containing human growth hormone fragment, used particularly for the production of human insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56 FVNQHIGGSHLVEALYLVGGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25
                                                                                                                                                                                            conformation: chimeric protein; cleavable; recombinant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 FVNOHLGGSHLVEALYLVGSERGFFYTPKTRGIVEQCCTSICSLYQLENYCN
                                                                                                                                                                       institut precursor, growth hormone, chaperone, intramplecular;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 52;
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Pred. No. 7.8e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TONG-) TONGHUA GANTECH BIOTECHNOLOGY LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Page 29-30; 46pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.1%; Scc...
100.0%; Pre-
0; '
                                                                                                                      Human insulin precorsor, SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-CR00052
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                                                                                                                                                                                                                        production: yield.
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                                                                        .9-JAN 2000
                                                                                                                                                                                                                                                                                                                     W09950302-A1
                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-1998;
                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                    .9961-100-70
                    AAY42859;
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9
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AAR04582 standard; protein; 57 AA.

AAPO4582 ID AARO XX

6,32.5

indela

Mismatches

0:

Conservative

Local Similarity bes 53; Conserv

Best Loca Matches

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50 9%; Score 299; 08 16; Lenath 146; 100.0%; Pred. No. 7.48-16;

|cocation/Qualifiers |44..129 |/note= "anchor attachment site"

95WO-BR0001C

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Misc-difference 44
                                                                                                                                                                                                                               16-FEB-1995;
                           Homma sapiens
                                                                                                                                              WO9522614-A1
                                                                                                                                                                                       24-AUG-1995.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ÷,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is joined to the C-terminus of an N-terminal transcut. comprising opt. modified tendamistate. This fusion protein may be converted into human insulin using known methods. The synthetic gene was prepared by the phosphoramidite method. See also AAOQA336. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                      /Tabel-Lys residue linking insulin B chain to A chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92,60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GPI; glycosylphophalidylinositol; insulin: hormone; solubilitation;
Saccharomyces cerevisiae; anchor; Gasl; plasmid pay40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55 REVNOHLGGSHLYBALYLVGGERGFPYTPKTRGLVEGGTSIGSLYGLENYCN 167 (1111-1)111-1)111-1)111-1 (111-1)111-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)11-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111-1)1-1 (111
                                                                                                    Proinsulin analogue with a Lys residue linking the A and H chains
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96.2%: Pred. No. 16-17/
Live 2; Mismarches 0/ Indels
                                                                                                                                            insulin fusion protein; pro-insulin analogue; tendamistate;
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                                                                                                                                                                                                                                                                                                                Ziabel Insulin B chain 37, 57
                                                                                                                                                                                                                                                                                                                                                37..57
/label- Insulin A chain
                                                                                                                                                                                                                                                Location/Qualifiers
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89DE-3927443.
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Best Local Similarity 96.2
Matches 51; Conservative
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                                                                                                                                                                 Lys-Lys bridge;
                                                                                                                                                                                                                                                                   misc-difference
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19-ACG-1989;
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14-SEP-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Recombinant produ. of proteins, e.g. insulin - by producing the protein with a glycosyliphosphatidylinositol anchor followed by selective releaso.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
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                                                                                                                                                                                                                                                                                                                                                                                                 Amaral De Castilho Valavicius
                                                                                                                                                 (ESCO-) ESCOLA PAULISTA MEDICINA.
(FINE-) FINEP FINANCIADORA ESTUDOS & PROJETOS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: September 16, 2003, 12:38:26 Job Line : 33.642 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Fig 3; Sipp; English.
94BR-0000600
                                                                                                                                                                                                                                                                                                                                                                                                 Cardoso De Almeida Mi,
Gomes De Amorim Filho A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-302726/39.
N-PSDB: AAQ99460.
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ses 53; Conserv
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17-FEB-1994;
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Gendare version 500.5
Copyright (c) 1999 - 2603 Cherryon Lid
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using sw model - protein search. OM protein September 16, 2003, 12:37:10 p. Seerch task 77:37 Seconds (Without alignments) 255,217 Million cell updates/see Run on:

TO UNDERNIED AND STREET OF THE STREET OF THE STREET US-09-423-100-6 587

1 MPPTIPLSRUFDNAMDRAHR... Title: Perfect score: Sequence:

328717 seqs, 42310858 residues Searched:

BLOSUM62 Gapop 10.0 , Gaphixt 0.5

Scoring table:

Total number of hits satistying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 160% Listing first 45 summaries

Database :

lssued\_Patents\_AA:\*
l: /cgn2\_6/ptodata/1/laa/5A\_CCMB.pop:\*
2: /cgn2\_6/ptodata/1/laa/5A\_COMB.pep:\*
3: /cgn2\_6/ptodata/1/laa/5A\_COMB.pep:\*
4: /cgn2\_6/ptodata/1/laa/5A\_COMB.pep:\*
5: /cgn2\_6/ptodata/1/laa/PCTUS\_COMB.pep:\*
6: /cgn2\_6/ptodata/1/laa/PCTUS\_COMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equa. to the score of the result being printed, and is derived by analysis of the total score distribution.

# SCIMMARIES

Result		o.tery				
. CN	Score	Match	Match Length	12	<b>a.</b>	Description
7	308	51.8	( S		US-08-160-376A-6	Sequence 6, April
7	302.5		137	٠.	US-08-400-256-39	-
e	302.5	51.5	137	·r.	68-08-975-365-39	Sequence 39. Arri
\$	299.5	51.0	66	-	US-08-291-040B-5	
tr)	299		99	-	US-03-160-376A-2	
Ġ	599	50.9	3.6	-	-80	
7	299	9.03	96	-	US-08-160-376A:5	
ဆ	299	50.9	96	_	US-08-389-487-8	
5	299	50.9	145	1	US-08-400-256-45	
10	299	50.9	145	~	55-68-975-365-45	
11	299		246	_	JS-08-400-256-48	
12	299	50.9	917	~	08-08-975-365-48	
13	293		57		US-06-030-731A-44	
14	287	48.9	55	~	US+08-900-574-3	
15	286.5	48.8	99	~;	08-08-900-574-3	
16	286	48.7	67	m	US 08-900-574 7	
٤.	264.5		S S	-	US-08-468-674B-71	
60 r 1	284.5	5.8	65	~	08-98-780-571-71	
19	284.5	4 8.5	124	۲,	-60-	
20	294	4.84	138	. <b>~</b> ·	US-08-932-082-19	Sequence 19. Arri
21	284	4.84	140	~	US-08-400 (256-33	
22	284	₹. 60 ₹3	140		US-08-400-256-42	Sequence 43. Apr.
23	294	48.4	140	~	JS-08-975-365-33	Sequence st. App.
24	284	4.8.4	140	~	US-08-975-365-42	Sequence 42. App.
25	283.5	43.3	53	٦	US-08-233-617-4	Sequence 4. Appli
56		48.3	53	4	- 1	Sequence 42, Appl
27	283.5	48.3	117	3	US-09-012-669F-37	Sequence 37, Appl

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Gaps

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53.8%; Score 304; DB 1; Length 63; 94.7%; Pred. No. 7.3e-29; tive 0; Mismatches 3; Indels

Query Match Best Local Similarity 94.7 Matches 54; Conservative

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# ALIGNMENTS

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APPLICANT: Gerl, Martin
APPLICANT: Gerl, Martin
APPLICANT: Gerl, Martin
APPLICANT: Lidwig, Jurgen
APPLICANT: Lidwig, Jurgen
APPLICANT: Lidwig, Jurgen
APPLICANT: Stabel, Walter
TITLE OF INVENTION: Process For Obtaining Proinsulin
TITLE OF INVENTION: Possessing Correctly Linked
TITLE OF INVENTION: Cystine Bridges
NUMBER OF SEQUENCES: 7
CORRESPONDENCE AUDRESS:
ADDRESSES: Renneth A. Genoul, Esq.
STREET: Rt. 202-206 No. 5473049th/P.O. Box 2500
CITY: Somerville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: December 1, 1993
CLASSIFICATION: 530
PRIOR APPLICATION: 530
PRIOR APPLICATION NUMBER: 0E P 4240420.7
FILING DATE: December 2, 1992
ATTORNEY/AGENT INFORMATION:
NAME: BATDARY N. MATER: 31,267
REFERRICE/COCKET NUMBER: 31,267
TELECOMMUNICATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOPTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/160,376A
                                        : Sequence 6, Application US/08160376A
; Patent No. 5473649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM: WINDOWS 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (908) 231-4079
TELEFAX: (908) 231-2255
INFORMATION FOR SEC ID NO: 6:
SEQUENCE CHARACIERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                    New Jersey
: U.S.A.
                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         CCUNTRY: U
RESULT 1
US-08-160-376A-6
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Washington
                                                                                                                                             STATE: New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3S-08-291-060B-5
                                                                                                                                                             COUNTRY:
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                                                                                                                                                                                7.TP:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 FPTIPLSRLFDNAMDRAHRLHGLAFDTYQEFERAYIPKEG KYSFLQ-- -----N 48
                                                                                                                                                                                                                                                                                                                          No. 57504970 No. 5750497disk of No. 5750497th America, Inc.
GTGPREVNQHLCGSHIVBALYINGGBRGFFYIPKTRGIVEDCCTSICSLYQLBNYCN (40)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SCFTWARE: Patentin Release #1.0. Version #1.25 CURRENT APPLICATION NATA:
PPLICATION NAFA: US/06/400.256
FILING DAIR: 03-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.5%, Score 302.5; DR 1; 50.0%, Pred. No. 2.9e-28; ative 4; Mismatches 27
                                                                                                                                                                                                                                                                                                                        ADDRESSEE: No. 57504970 No. 5750497disk street: 405 Lexington Avenue, 64th Floor
                                                                                                                                                                           APPLICANT Havelund, Svend
APPLICANT Halstrom, John
APPLICANT JORSSON, 16
APPLICANT Andersen, Asser Sloth
APPLICANT MAKESSON, 13
APPLICANT ACVIATED INSULIN
NUMBER OF INVENTION: ACVIATED INSULIN
NUMBER OF SEQUENCES: 49
CORRESPONDENCE AUDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3985.220-05
                                                                                                                                                                                                                                                                                                                                                                              New York
: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER HEADABLE FORM:
MEDIJM TYPE: Floppy disk
COMPUTER: ITM PC COMPATILLE
OPERATING SYSTEM: PC-7/8/2MS-IDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
US-08-975-365-39
Sequence 39, Application US/08975365
Patent No. 50,1907
GENERAL INFORMATION:
APPLICANT: Havelund, Svend
APPLICANT: Havelund, John
                                                                                        RESULT 2
US-08-400-256-39
: Sequence 39, Application US/08400255
: Patent No. 5750497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88 IVEQCCTSICSLYCLENYCN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 03-MAR-1995
CLASTIFICATION: 514
ATTORNEY/ASENT INFORMATION:
NAME: LAUNDITES, ELLIAS J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3985.
TELECOMMONICATION INFORMATION:
TELEFHONE: 212-867-6223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 212-876-3655
INFORMATION FOR SEC 1D NO: 39:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             137 amino acids
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Best Local Similarity 50.0%
These 70, Conservative
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                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Havelui
                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: United
ZIP: 10174-6401
                                                                                                                                                                                                                                                                                                                                                             New York
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ADDRESSEE: No. 6C11007o No. 6C11007disk of No. 6C11007th America, Inc.
STREET: 405 Lexington Avenue, 64th Floor
CITY: New York
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GENERAL INFORMATION:
APPLICANT: Dorschug, Michael
APPLICANT: Molier, Klauder-Peter
APPLICANT: Marquart, Rudiger
APPLICANT: Meiwes, Johannes
TITLE OF INVENTION: An Enzymatic Process for the
TITLE OF INVENTION: Conversion of Preproinsulins Into Insulins
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS: 6
ADDRESSEE: Firmegan, Honderson, Farabow, Garrett &
ADDRESSEE: Dunner, L.L.P.
STREET: 1300 I Street, N.W.
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Pred. No. 2.9e-28;
4; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3985.220-08
                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
CLASSIFCATION: 514
PRIOR APPLICATION DATA:
APPLICATION NAME: CS 06/460,256
FILING DATE: 03-NAR-1995
ATTCRNEY/AGENT INFORMATION:
NAME: Lambirs, Elids J.
RECISTRATION NUMBER: 33,728
RECERENCK/DOCKET NUMBER: 3985.220-08
APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
                                                                                                                                                                        NY: United States of America 10174-6401
                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERAIING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        88 IVEQCCTSICSLYQUENYCN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 212-878-9655
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51.5%;
Local Similarity 50.5%;
es 70; Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   212-867-0123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 137 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KOLECULE TYPE: protein (IS-08-975-365-39
                                                                                                                                                                                                                      COMPUTER READABLE FORM:
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Washington
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Hest Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
US-08-389-487-11
                                                                                                                                   7.8 - 08 - 166 - 376A-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 299.5: DH 1; Length 66;
Pred. No. 2.5e-26;
1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Obermoier, Ranior APPLICANT: Gerl, Martin APPLICANT: Gerl, Martin APPLICANT: Gerl, Martin APPLICANT: Gerl, Watter TITLE OF INVENTION: Process For Obtaining Proinsull: TITLE OF INVENTION: Possessing Correctly Linked FITLE OF INVENTION: Cystine Bridges NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.44 Mt. STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSEE: Kenneth A. Galoni, Esg.
F: Rt. 262-206 No. 3473049th/P.C. Box 2500
Somerville
                                                                                                          SOFTWARE: Patentin Release #1.0. Version #1.6. CURRENT APPLICATION DATA:
                                                                                                                                                                                                              ATTORNEY/AGENT INCRMATION:
NAME: Elaaudi, Carol P.
REGISTRAILON NUMBER: 32,226
REFERENCE/COCKET NUMBER: 02481.1165-02206
TELECOMMUNICATION INFORMATION:
TELEFAR: (202) 408-4465
INFORMATION FOR SEQ ID NO: 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: HOE 92/F 384 TELECOMMUNICATION INFORMATION:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/03/160,376A
FILING DATE: December 1, 1993
CLASSIFICATION: 530
                                                                                                                                                    APPLICATION NUMBER: US/03/251,060B
FILING DATE: 08 AUG-1994
CLASSIFICATION: 435
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ZIP: 08876-1258
COMPUTER READABLE FORM:
MELLUM TYPE: U.SKSTTE, N.S. INCH.
COMPUTER: ISM 386
ZIP: 2005-315
COMPUTER RANDABLE PORM:
WEDTUM TYPE: Floppy disk
COMPUTER: 18M PC COMPUTE its
OPERATING SYSTEM: PC-DOS/MS-DGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence 7, Application US/08150376A Patent No. 5473049
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REGISTRATION NUMBER: 31,287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 91.7%;
Matches 55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: December 2, ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 66 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ) TOPCLGGY: linear
) MOLECULE TYPE: peptide
US-08-291-0608-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acid
STRANDEDNESS: sir
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US-09-160-376A-7
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O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11, Application US/38389467
Patent No. 566331
SENERAL INPRMATION:
APPLICANT: Obermeter, Rainer
APPLICANT: Gerl, Martin
APPLICANT: Ludwig, Jureen
APPLICANT: Ludwig, Jureen
APPLICANT: Sabel, Walter
TILLE OF INVENTION: Correctly Linked Cystine Bridges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.9%; Score 299; DB 1; Length 56; 106.0%; Pred. No. 2.4e-28;
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
ADDRESSEE: Dunnor
STREET: 1300 I Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIATE: D.C.
CONWINY: United States of America
ZIP: 20005-3315
COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
OWRPTER: IBM FC compatible
OWRATING SYSTEM: PC-505/MS-DOS
SOFWMARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DAIA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NOMBER: 02481.1424-00600
TELECCMMUN:CATION INFORMATION:
TELEPHONE: 202-408-4000
TELEFAX: 202-408-4400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Owery Match 50.9%; Score 299; DB Best Local Similarity 106.0%; Pred. No. 2.4 Matches 53; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/389,487
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ATTORNEY/AGENT: INPORMATION:
NAME: Elnaudi, Carol P.
EGISTRATION NUMBER: 32,220
TELEPHONE: (908) 231-4079
TELEFAX: (958) 231-2255
INFORMATION FOR SEC 15 NO. 7:
SEQUENCE CHARACTERISTICS:
LENTH: 56 ARIDO ACIDS
TYPE: Amino Acids
TYPE: Amino Acids
TYPE: Amino Acids
TYPE: Amino Acids
TELEGEORY: not relevant
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 56 amino acids
                                                                                                                                                                                                                                                                                    53; Conservative
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STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JS-08-389-487-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Obermeier, Rainer
APPLICANT: Geri, Martin
APPLICANT: Ludwig, Jurgen
APPLICANT: Sabel, Walter
TITLE OF INVENTION: Process for Obtaining Insuli: Having
TITLE OF INVENTION: Correctly Linked Cystine Bridges
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thatts
                                                                                                          APPLICANT: Ludwiq, Jurgen
APPLICANT: Sabel, Walter
APPLICANT: Sabel, Walter
TITLE OF INVENTION: Process For Obtaining Profusalin
TITLE OF INVENTION: Possessing Correctly Licked
TITLE OF INVENTION: Cysting Bridges
CORRESPONDENCES: 7
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Finnegan, Hencerson, Farabow, Garrett &
                                                                                                                                                                                                                                                                                                                                                                                                                                DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
                                                                                                                                                                                                                                                               ADDRESSEE: Kenneth A. Genoni, Esg.
STREET: Rt. 202-206 No. 5473649th/P.C. Hox 2500
CITY: Somerville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 50.9%: Score 299: LRF1: Dast Local Similarity 100.0%; Pred. No. 4.8e-28.
Matches 53: Consorvative D. Miscatches C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Barbara V. Maurer, Esq. REGISTRATION NUMBER: 31,287
REFERENCE/DOCKET NUMBER: HOE 92/F 384
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: WINDOWS 3.:
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/06/160,375A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: GE 9 4240420.7
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. Sequence 5, Application US/0818.3376A
. Patent No. 5473049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: December 2, 1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  December 1, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 8, Application US/U83F9487
Patent No. 5663291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Dunner
1300 I Street, N.W.
                                                                  Obermeter, Ranier
Gerl, Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (908) 231-4070;
TELEFAX: (908) 231-2255
INFORMATION FOR SEQ ID NO: 5: SEQUENCE, CHARACTERISTICS:
LENGTH: 96 AMINO ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             not relevant
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                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: December CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                      STATE: New Jersey COUNTRY: U.S.A. ZIP: 08876-1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                       :BM 386
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CITY: Washington
STATE: D.C.
                                        GENERAL INFORMATION:
APPLICANT: Obermer
APPLICANT: Gerl, N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-160-376A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
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405 Lexington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/400,256
FILING DATE: U3-MAR-1995
CLASSIFICATION: 514
CCMPUTER READABLE FORM:
MEDIUM TYPE: Eloppy disk
COMBUTER: IBM PC (compatible
COPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Refease #1.0, Version #1.25
CURENT: APPLICATION DATA:
APPLICATION NUMBER: US/08/389,487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02481.1424-00000
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APPLICANT: Jonassen, 1b
APPLICANT: Andersen, 1b
APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACVIATED INSULTN
NJMEER OF SEQUENCES: 49
CORRESTCONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: New York
COUNTRY: United States of America
21P: 10174-6401
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DGS/MS:DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 45, Application US/08460256
Patent No. 5750449
OPMERAL INFORMATION:
APPLICANT: Havelund, Svend
APPLICANT: Halstrom, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Elnaudi, Carol F.
REGISTRATION NUMBER: 32,220
REFERENCE/DOCKET NUMBER: 024
TELECOMUNICATION INFORMATION:
TELEPHONE: 202-408-4000
TELEFAX: 202-408-4400
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NAME: Lambirs, Elias J.
REGISTRATION NUMBER: 33,726
REFERENCE/POOCKET NUMBER: 399
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACIERISTICS: LENGTH: 96 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                            ALTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145 amino acids
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MCLECUSE TYPE: peptide
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COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                           FILING DATE:
CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
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STATE: New York
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TOPOLOGY:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
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US-08-975-365-48
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STREET: 405 Lexington Avenue, 64th Floor
CITY: New York
                                                                                                                                                55 REVNOHIGGSHIVEALYLVGGERGFFYTPKTRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                 <u>.</u>-
                                                                        56.99; Score 299; DB 1; Leggth 145,
196.50%; Pred. No. 7.96-24.
Live C; Mismatches C; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 50.9%; Score 299; DR 3; Londth 145; Best Local Similarity 120.0%; Pred. No. 7.36-26; Matches 53; Conservative C; Mismatches C; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: 05/08/975,365
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TORNEYAGGW. .... - NAME: Lambiris, Elias J. REGISTRATION NUMBER: 33.728
REGISTRATION NUMBER: 39.65.220-CS
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/400,256
FILING DATE: 03-MAR-1945
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 10174-6401
COMPUTER REATABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1HW PC compatible
OPERATING SYSTEM: PC-DOS/MS-DUS
                                                                                                                                                                                                                                                                                                                                                                                                Anderson, Asser Sloth
                                                                                                                                                                                                                                                                                Sequence 45, Application US/08375365
Patent No. 6011607
GENERALI XRCHAWATION:
APPLICANT: Havelund, Svond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
US-08-400-256-48
: Sequence 48, Appl:cation US/08400256
: Patent No. 5750497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 39
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INFORMATION FOR SEQ ID NO: 45:
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LENGTH: 145 amino acids
TYPE: amino acid
                                                        Ouery Match
Best Local Similatity 100.00
Themas 53, Conservative
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                 MOLEGULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                         Halstrom,
                                                                                                                                                                                                                                                                                                                                                                              Jonassen,
 linear
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 TOPOLOGY:
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                                     115-08-400-256-45
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                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
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STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: No. 6011807g No. 6011807disk of No. 6011807th America, Inc.
STREET: 405 Lexington Avenue, 64th Ploor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HELLITITE HELLITE HELL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OCHIVER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.6, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patentin Release #1.0, Version #1.25
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APPLICANT: Andersen, Asser Sloth
APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACKLARTED INSULIN
                                                                                                                                                                                                APPLICANT: Markussen, Jan
TITLE OF INVENTION: ACYLATED INSULIN
NUMBER OF SEQUENCES: 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: United States of America ZIP: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W: United States of America
19174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA: APFLICATION NUMBER: US/08/400,256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: FlopEy disk
CMBUTER: IRM PC compatible
OPERATING SYSTEM: PC-50S/MS-50S
                                                                                                Jonassen, Ib
Andersen, Asser Sloth
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Patent No. 6011607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 398
REJECOMMUNICATION INFORMATION:
TELEPRIONE: 212-867-5123
TELEFAX: 212-876-9655
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APPLICANT: Havelund, Svend
APPLICANT: Halstrom, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 03-MAR-1995
CLASSIFICATION: 514
Havelund, Svend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATIORNEY/AGENT INFORMATION:
NAME: Lambiris, Elias J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146 amino acids
                                                     Halstrom, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Δ.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : MOLECULE TYPE: protein US-08-400-256-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIAIE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: New York
STATE: New York
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREAM OF STREAM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Insulin derivatives with increased zinc
TITLE OF INVENTION: hinding
NEMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ©.ory Match 45.9%; Score 293; DB 1; Length 57; Best Local Similarity 96.2%; Pred. No. 1.3e-27; Matches 51; Conservative 2; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMBUTER: IBM PC COMPATIBLE
CORBATING SYSTEM: PC-DGS/MS-DGS
SOPIWARE: PATENTIN Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/900,574
FILING DATE: July 24, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Finnegan, Henderson, Farabow, Gairett,
S. & Dunner, L.L.P.
1300 I Street, N.W.
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REFERENCE/DOCKET NUMBER: 02481,1499-00000
TELECOMMANICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                             02481-0593-02000
                                                                                                                                                          FRIANG AFFILATION NUMBER: DE P 39 27 449.7
FILING DATE: 19-AUG-1989
FROM APPLICATION DATA:
APPLICATION NUMBER: DE P 40 12 818.0
FILING DATE: 21-APR-1990
ATTOMNEY/AGENT INFORMATION:
NAME: KIFSCHOET MICHAEL 84.85.
REGISTRATION NUMBER: 34.85.
REFERENCE/DOCKET NUMBER: 02481-0593-020
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-408-4000
                                                                             DE P 38 37 273.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Segrence 3, Application US/08900574 Patent No. 6221837
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: German A;
FILING DATE: July 26, 1996
ATTORNEY/AGENT INFORMATION:
NAME: Carol P. Einaudi,
REGISTRATION NUMBER: 32,220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Washington
STATE: District of Columbia
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 202-408-4000
TELEFAX: 202-406-4400
INFORMATION FOR SEQ ID NO: 44:
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(202) 408-4400
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APPLICANT: Habermann, Paul
APPLICANT: Geisen, Karl
APPLICANT: Seipke, Gerhard
                                                                                                         03-NOV-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 57 amine acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
TOPOLOGY: unknown
MOLECULE TYPE: peptide
                                                                  APPLICATION NUMBER: I
FILING DATE: 03-NOV-1
PRIOR APPLICATION DATA:
                                          PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50.9%; Score 299; DH 3; Length 145;
100.0%; Pred, No. 8e-28;
Live 6; Mismatches 6; Indols
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 2006-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC comparible
OPERATING SYSTEM: PC-DGS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                        NAME: Lambiris, Ellas J.
REGISTRATION NUMBER: 33,728
REFERENCE/DOCKET NUMBER: 3985.220-US
RELECOMMUNICATION INFORMATION:
TELEPHONE: 212-867-023
TELEFAX: 212-867-023
INFORMATION FOR SEQ ID NO: 48:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DE P 37 14 866.4
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PRIOR APPLICATION DATA:
PAPLICATION NUMBER
PILING
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 07/587,610
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APPLICATION NUMBER: US/08/975,365
                                                                                                                                     US 08/400,256
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GENERAL INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P
                                                                                                                                                                  FILING DATE: 03-MAR-1995
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 146 amino acids
amino acid
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Best Local Similarity 160.6
Matches 53, Cosservative
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PRIOR APPLICATION DATA: APPLICATION NUMBER: (FILING)
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                                                                  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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                                          FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
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Patent No. 6221837
CEMEAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Erl. Johann
APPLICANT: Gelsen, Karl
APPLICANT: Seipke, Gernard
TITLE OF INVENTION: Insulin derivatives with increased zinc
TITLE OF INVENTION: Dadding
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48.9%; Score 262; PR 2; Eventh 65: 91.4%; Pred. No. 7.70°.27; style 0; Mismatches 3; Indels
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COUNTRY: U.S.A.
Z.P. 20005-3315
COMPOTER READSHEE FORM:
MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARF: Parcentin Release #1.S. Version #1.25 (EPS)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Finnegan, Henderson, Farabow, Garrett,
ADDRESSEE: & Dunner, L.D.P.
STREET: 1300 I Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Carol P. Elnaudi
REGISTRATION NUMBER: $2.220
REFERENCE/ZOCKET NUMBER: 02481.1499-00030
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 35/38/300.574
FILING DATE: 3uly 24, 1937
GLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NORMER: German Applicat
FILING DATE: duly 26, 1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                      ORGANISM: Escherichia (0):
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Escherichia cott
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (202) 408-4000
TELEFAX: (202) 408-4400
INFORMATION FOR SEC ID NO. 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 91.44
Matches 53: Conservative
                                                                                           65 amino acids
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INFORMATION FOR SEQ IC NO:
                                           SEQUENCE CHARACTERISTICS
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ORIGINAL SOURCE:
                                                                                                                         Amino acid
EDNESS: Single
                                                                                                                                                                                                                                      MOLECULE TYPE: Protein
ORIGINAL SCURCE:
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1..65
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                                                                                  LENGIH: 65 ami
TYPE: Amino ac
STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION:
US-08-900-574-3
                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
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US-08-900-574-5
                                                                                                                                                                                                                                                                                                                                                                             FEATURE
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DOCATION: 1.66

18-06-300-574-5

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(Without alignments)
472.415 Million rell appartes/sec
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Cura_6/ptodata/2/pubpaa/USO7_FUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO6_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO6_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO7_NEM_PUB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO8_NEM_PUB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO8_NEM_PUB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO9_PUBCOMB.pep: .

Cgnz_6/ptodata/2/pubpaa/USO9_PUBCOMB.pep: .

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Cgnz_6/ptodata/2/pubpaa/USO9_NEM_PUB.pep: .
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Genfore version 5.1.5 Copyright (c) 1993 - 2003 Compuger Ltd.
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Listing first 45 summaries
                                                                                                                                                                OM protein – protein search, using sw model
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Maximum DB seg length: 2000000000
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597
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Perfect score:
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Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being princed and is derived by analysis of the total score destribution.

SUMMARLES

fescrift to:	Secuence 6. Ass. 1		Sequence a Not	Sequence 1e. Acc.	Sequence 19, Apr	Sequence . App.	.,	·*·		Sequence 1., App.	٠.,		Sequence 16, App.	-	
10	US-10-054-873-6	US-10-054-873-7	US-10-654-873-5	US-06-864-711-18	US-69-861-687-19	08-09-858-6358-5	US-10-028-410-3	JS-09-280-030-64	US-09-947-563-4	US-09-736-611 12	_		US-09-736-611-10	US-09-740-359-10	US-09-894-711-10
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Score	587	555.5	294	284.5	284	278.5	278.5	278	277	275.5	275.5	275.5	275.5	275.5	275.5
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Sequence 7, Appli Sequence 7, Appli Sequence 6, Appli Sequence 5, Appli Sequence 5, Appli		Sequence 4, Apli Sequence 125, App Sequence 3, Appli Sequence 6, Appli Sequence 6, Appli Sequence 1, Appli		, , , , ,
9 CS-09-736-611-8 9 CS-09-740-359-7 9 CS-09-736-611-6 9 US-09-740-359-5 10 US-09-894-711-5	14 US-10-C66-009A-3 15 US-09-947-563-5 9 US-09-280-030-62 10 US-09-378-380-1 11 US-09-378-380-1 14 US-10-528-410-2		15 GS-10-328-813-2 14 GS-10-054-873-1 14 GS-20-054-873-1 11 GS-10-984-010-23 12 GS-10-153-207-1 12 GS-10-400-377-1 12 GS-10-400-37-1	12 US-110-298-148-1 12 US-110-153-207-6 12 US-09-529-928-9 9 US-09-529-030-66 10 US-09-894-711-7 9 US-09-853-688-2
147 147 144 144 146	50 95 95 85 85	# 1111111 # 000000	50000000 50000000	191 214 245 144 217
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AL LGNMENTS

TITLE OF INVENTION: Chimeric Protein Containing an Intramolecular Chaperone-Like Sequence COMPUTER: 1BM PC compatible OPERATING SYSTEM: PC-DOS/MS-30S SOFTWARE: PatentIn Release #1.6, Version #1.39 ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, Bighth Floor CITY: San Fracisco STATE: California COUNTRY: USA 21P: 94:11-3834 21P: 94:11-3834 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: LLM FLOOPY ALSE FORM: COMPUTER: LLM FLOOPY ALSE FORM: REFERENCE/DOCKET NUMBER: 020167-000130US FRIOR APPLICATION DATA: APPLICATION NUMBER: WC PCI/CN98/00352 FILING DATE: 31-MAR-1998 APPLICATION NUMBER: US 09/423,100 CURRENT APPLICATION DATA:
REPLICATION NUMBER: US/IC/054,873
ELLING DATE: 22-Jan-2002
CLASSIFICATION: <a href="https://doi.org/10.1007/com/">CLASSIFICATION: <a href="https://doi.org/">CLASSIFICATION: <a href="https://doi.org/">ACTION ACTION ACTIO NAME: Mycroft, Frank J REGISTRATION NUMBER: 46,946 FILING DATE: 11-DEC-2060 ATTORNEY/AGENT INFORMATION: Sequence 6, Application US/10054873
Publication No. US20020164712A1
GENERAL INFORMATION:
APPLICANT: Gan, Zhong Ru INFORMATION FOR SEQ IT NO: 6: SEQUENCE CHARACTERISTICS: LENGTH: 107 amino acids TYPE: amino acid CORRESPONDENCE ADDRESS: ADDRESSEE: Townsend NUMBER OF SEQUENCES: NAME: Mycrott. US-10-054-875-6 RESULT

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6) TPSNREETQQKSNLELLRISLLLIQSWLEPVOLGTGPRFVNOHLGGSHLVEALYLVGGER 120
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Kjeldsen, Thomas Borglum APPLICANT: Ludvigsen, Svend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 18, Application US/09894711 Patent No. US2002013714481
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Publication No. US20020164712A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                 CITY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query March
Bost Local Similarity 100.0
Matches 52, Conservative
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                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANI: Gan,
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                                                                                                                                                       Gaps
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ITTLE CF INVENTION: Chineric Protein Containing an
Intramolecular Chapmren-Like Sequence
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                                                                                                                                                                                                                                                                                       61 LOGSHLVEALYIVGGERGFFYTPKTRGIVEQCCTSICSLYQLENYON 107
                                                                                                                                                     indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: FC-10S/MS-DGS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION MMERR: US/10/1054,#373
FILING DATE: 22-3a7-2002
CLASSIFICATION: 444 Known:>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSE: Townsen, and jownsend and Grew Lip
STREBT: Two Embarcadero Center, Elgith Floor
CITY: San Francisco
STATE: Callfornia
                                                                                                               100.0%; Score 587; DB 14;
100.0%; Pred. No. 5.2e-63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 020167-00013008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: WO PCIT/GN98/00002
FILING DATE: 31-MAE-1999
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 7:
               TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Mycroft, Frank J
REGISTRATION NUMBER: 46,946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 94111-1834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 7, Application US/10054873 Publication No. US20020164712A1 GENERAL INFORMATION:
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TYPE: amino acid
STRANDEDNESS: <Unkrown>
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SEQUENCE CHARACIERISTICS
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                                                                                                           Ouery Match
Best Local Similarity 100.0
Matches 107: Conservative
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Best Local Similarity
Matches 107; Conserv
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                                                                         US-10-054-873-6
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APPICANT: Ludvigsen, Svend
TITLE OF INVENTION: Method for making insulin precursors and
TITLE OF INVENTION: insulin precursor analogues having improved fermentation
TITLE OF INVENTION: yield in yeast
FILE REPERENCE: 6148,400-US
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                                                                                                                                                                                                                                                                                                                Intramolecular Chaperone-Like Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                       APPLICANI: Gan, Zhong Ru
TITLE OF INVENTION: Chimeric Protein Containing an
                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew JLP
STREET: Two Fmbarcadero Center, Eighth Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Mycroft, Frank J
REGISTRATION NUMBER: 46,946
PEFERENCE/POCKET NUMBER: 020167-00C130US
:NEORMATION FOR SEO ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50.1%; Score 294; DB 14;
100.0%; Pred. No. 4.1e-28;
17c 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHIOR APPLICATION DATA: APPLICATION NUMBER: WO PCT/CN98/00052
FILING DATE: 31-MAR-1998
APPLICATION NUMBER: US 69/423,100
FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEG ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/894,711; CURRENT FILING DATE: 2001-06-28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 FPSI-----FTAVLFAASSALAAPVNTITEDETAQIPAEAVIGYSDLEGDFDVAVLPFSN 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49 PLGTG---------PRFVNOHLCGSHLVEALYLVCGERGFFYTPK-TR 86
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ::
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APPLICANT: Filvaroff, Ellen
APPLICANT: Filvaroff, Ellen
APPLICANT: Filvaroff, Ellen
APPLICANT: Filvaroff, Ellen
TITLE OF INVENTION: MEHOE PG. TEATING CARTILAGE DISORDERS
FILE REPERCE: 21794x1
CURRENT APPLICATION NUMBER: US/09/88,9358
CURRENT FILMG DATE: 2002-07-02
PRIOR FILMG DATE: 2006-11-15
PRIOR FILMG DATE: 2006-11-15
PRIOR FILMG DATE: 2006-05-16
PRIOR FILMG DATE: 2006-05-16
SED ID NO 5: 153
LENGTH: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11; Length 51;
                                                                                                                                                                                                                                                         Length 138;
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                                                                                                                                                                                                                                               Score 284; DB 10; I
Pred. No. 2.2e-26;
5; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.4%; Score 278.5; EB 11; ilarity 98.1%; Pred. No. 2.96-26; Conservative 0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                              5; Mismatches
                                                 MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/028,410 CURRENT FILING DATE: 2001-12-19 FRICE FILING DATE: 2000-1-35 NUMBER OF SEQ ID NOS: 6 NUMBER OF SEQ ID NOS: 6 NUMBER OF SEQ ID NOS: 5 NEOTH OF SEQ ID NOS: 6 NUMBER OF SEQ ID NUMBER OF SEQ ID NOS: 6 NUMBER OF SEQ ID NOS: 6 NUMBER OF SEQ ID NUMBER OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AFFLICANT: Dubaquie, Yves
AFFLICANT: Lowman, Henry
LITLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 GIVEQCCISICSLYQLENYCN 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87 GIVEQCCTSTCSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/09858935B Publication No. US20330069177A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/10028410 Publication No. US20020160955A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                    48.4%;
                                                                                                                                                                                                                                                                                                      Sest Local Similarity 48.2
Matches 68, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
US-09-858-935B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : ORGANISM: Homo sapiens
US-10-028-410-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rest Local Similarity
Natures 51; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CS-09-858-335B-5
                                                                                                                                                     US-09-861-687-19
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                                                                                                                                                                                                                                                              Ouery Match
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STREET: 405 Lexington Avenue, 64th Floor
CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54 PREVNQHLCGSHLVEALYLVGGERGFFYTPK-IRGIVEQCCISICSLYGLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FERMAGELGGSHIVEALTHEFETHEFE THE FEHT FEHTE THE TOTAL STANDER SERVICE STANDER SERVICE STANDER SERVICES 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match 48.5%; Score 284.5; US 10; Length 124: Best Local Similarity 92.7%; Prod. No. 1.76-26; Matches 51; Conservative 2; Mismatches 1; Lidels 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUSER REACAMEE FORM:
MEDITAL TYPE: Flappy disk
COMPUTER: TAM PC COMPUSER:
COMPUTER: TAM PC COMPUSER:
COMPUTER: TAM PC COMPUSER:
COMPUTER: TAM PC COMPUSER:
COMPUTER: Fation: Lo Neleaso #1.4, Vorsion #1.40
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TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hansen, Hertz Per
Kaarsholm, Niels Christian
INVENTION: INSULTN DERIVATIVES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: United States of America 2:P: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/861.687
                             PRIOR FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: PA 1999-61869
PRIOR FILING DATE: 1999-2-2-23
PRIOR PELICATION NUMBER: 60/2211.031
PRIOR FILING DATE: 2000-66-13
PRIOR FILING DATE: 2000-06-13
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 2000-02-10
PRIOR FILING DATE: 2000-12-19
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FILING DATE: 16-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 20
SOFTWARE: FastSED for Windows Version 4.0
PRICK APPLICATION NUMBER: PA 2000 00443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Lambiris, Elias J.
REGISTRATION NUMBER: 33,728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 21-May-2001
CLASSIFICATION: <UCKNOWE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
US-09-861-697-19
Sequence 19, Application US/09861687
Publication No. US2002019329281
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212-867-0123
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Kurtzhais, Peter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jonassen, Ib
Havelund, Svend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 212-878-9655
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 19:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Synthetic US-09-894-711-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
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APPLICANT: Lodvigser, Svend
APPLICANT: Lodvigser, Svend
APPLICANT: Lodvigser, Svend
APPLICANT: Karsholm, Niels
TITLE OF INVENTION: Method For Making Insulin Precursors and
TITLE OF INVENTION: Insulin Precursor Analogs
FILE REFERENCE: 6056.200-05
CURRENT APPLICATION NUMBER: CS/09/736.611
PRIOR APPLICATION NUMBER: 60/181,443
PRIOR FILING DATE: 2000-02-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 96;
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/134,836
FILING DATE: clorknown>
ATTORNEY/AGENT INFORMATION:
MANE: Leslie McDoneil
REGISTRATICN NUMBER: 34,872
REPREVEK/POOKET NUMBER: 02481.1600-030C0
IELECOMMUNICATION INFORMATION:
TELECHONE: (202) 408-4400
IELEFRAX: (202) 408-4400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 47.2%; Score 277; DB 10; Best Local Similarity 59.3%; Pred. No. 9.8e-26; Matches 54; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51 GTGPRFVNCHLCGSHLVEALYLVGGERGFFYTPKT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86 ------RGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66 LALEGSIGKRGIVECCUSICSLYQLENYCN 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRICE APPLICATION NUMBER: 60/181,443
PRICE APPLICATION NUMBER: 60/210
PRICE APPLICATION NUMBER: 60/211,441
PRICE FILING DATE: 2000-06-13
PRICE APPLICATION NUMBER: PA 1999 01868
PRICE FILING DATE: 1999-12-29
PRICE FILING DATE: 2000-03-17
NUMBER OF SEO ID NOS: 18
SOFIWARE: FASISEO for Windows Version 4.0
                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/947,563
FILING DATE: 07-Sep-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE DESCRIPTION: SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-736-611-12

Sequence 12, Application US/09736611

Patent No. 0S20016023059A1

GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 96 amine acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRI
ORGANISM: N-terminal extension
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (202) 408-
INFORMATION FOR SEQ 10 NO: 4:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-736-611-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 63, Application US/99380030A

PREFIX NO. USZOJ0021515A1

PREFIX THE OF USZOJ0021515A1

APPLICANT: Hadshikuni, Nachiko

APPLICANT: Hadshikuni, Nachiko

APPLICANT: Hadshikuni, Nachiko

APPLICANT: Rondo, Masaaki

APPLICANT: RONGO, TCSHIYUKI

APPLICANT: NACHICANTON: PREPARING USHFU: POLYPERTIDES THROUGH EXPRESSION OF THE TITLE OF INVENTION: PASS

CURRENT FILING DATF: 1999-03-26

CURRENT FILING DATF: 1999-03-35

NUMBER OF SEC 10 NUS: 66

SOFTWARE: PARCOLIN VET: 2.0

SEQ ID NO 63

LENGTH: 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: Designated is OTHER INFORMATION: an amino acid sequence of OTHER INFORMATION: MWPsp-MWPmplD-Mot-Pro:nsulin
                                                                                                                                                                                        56 FVNQHLCGSHLVBALYLVGGRGFFYTPKTRGTVBGCTSTCSLYGLBNYCN 107
                                                                                                                                                                                                                                  | HITHERTHIE | HITCHIE | HITE 
                                 Query Match 47.4%; Score 278.5; DS 14: Lengto 51: Best Local Similarity 98.1%; Pred. No. 2.96-26; Matches 51: Conservative 0: Mismatches 0: Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Finnegan, Henderson, Farrabow, Garrett &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
47.44, Score 278, 18 3; Length 117.
Best Local Similarity 60.38; Pred. No. 9.56-25;
Matches 54; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52 TCPREVNQHICGSHLVEA.YLVCGERGFFY;PKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 -----RGIVEQCCTSICSLYQLENYCN 107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 26005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Rubroder, Franz-Joset
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 1300 I Street, N.W.
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Patent No. US20020156234Al
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Keller, Reinhold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
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                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-280-030-63
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US-09-947-563-4
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GENERAL INFORMATIONS
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SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-09-746-611-10
                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESIDE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
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US-09-694-711-12
Sequence 12, Application US/09894711
Sequence 12, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Advigator, Thomas Borqlum
APPLICANT: Lidvigator, Thomas Borqlum
APPLICANT: Lidvigator, Svend
TITLE OF INVENTION: Method for making insulin precises and
TITLE OF INVENTION: Method for making insulin precises and
TITLE OF INVENTION: Method for making insulin precises and
TITLE OF INVENTION: Tried in precise analogics having improved formerstion
TITLE OF INVENTION: Tried in peast
FILE REFERENCE: 614220-U5
CURRENT APPLICATION NUMBER: PA. 2000-00443
PRIOR APPLICATION NUMBER: PA. 1999-01869
PRIOR FILING DATE: 1999-12-29
PRIOR FILING DATE: 2000-00-17
PRIOR APPLICATION NUMBER: 66/211,081
PRIOR FILING DATE: 2006-06-13
PRIOR FILING DATE: 2006-06-13
PRIOR FILING DATE: 2006-06-13
PRIOR FILING DATE: 2006-06-13
PRIOR FILING DATE: 2006-02-10
NUMBER OF SEQ ID NOS: 16
                                                                                          side: :: side::
                                                                                                                                                            146.9%, Score 275.5; DB 3; length 124; Similarity 90.9%, Pred. No. 2.1e-25; 0.00 Conservative 2; Mismatches 2; indels 1
       Length 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . ORGANISM: TAS7 leader fused with N-terminally extended.
US-09-740-359-12
       Score 275.5; DB 9:
Pred, No. 2.1e-25:
2; Mismatches 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ 15 NOS: 20
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ 1D NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12, Application US/09740359
Patent No. US20010041787A:
               46.9%;
90.9%;
                                                                                      50; Conservative
Query Maich
Hest Local Surilarity
Matches 50; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
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Best Local Simil
Matches 50: C
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Sequence 10, Application US/09740359
Sequence 10, Application US/09740359
Sequence 10, Application US/09740359
SEQUENCE 10, US/001004178741
SENERAL INFORMATION:
APPLICANT: Kicidson, Homas Borglum
APPLICANT: Lidition, North Send
STITE OF INVENTION: Method for maxing insulin precursors and
STITE OF INVENTION: Assolin precursor analogues having improved fermentation
STITE OF INVENTION: MABER: US/09/740.359
SUBREMT APPLICATION NUMBER: US/09/740.359
SUBREMT PILITS DATE: 2000-03-17
SPRIOR FILING DATE: 2000-03-17
SPRIOR FILING DATE: 1999-01865
SPRIOR APPLICATION NUMBER: 89 1999 01865
SPRIOR APPLICATION NUMBER: 1900-03-17
SPRIOR FILING DATE: 2000-06-13
SPRIOR FILING DATE: 2000-06-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70 PKFVNQHLGGGSHLVEALYLVGGERGPPYTDKBGKGIVEGCTSICSLYQLENYCN 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APELICANT: Ludyisen, Thomas APELICANT: Ludyisen, Svend TILLE COETHWENTON: Method For Making Insulin Precursors and TILLE COETHWENTON: Insulin Precursor Analogs FILE REPERENCE: 6058 2004 Sy/09/736,611 CURRENT PAPLICATION NUMBER: 35/09/736,611 CURRENT FILING DATE: 2000-012-14 PRIOR PLING DATE: 2000-05-13 PRIOR APELICATION NUMBER: 60/211,441 PRIOR APELICATION NUMBER: PA 1999 01868 PRIOR PLING DATE: 2000-06-13 PRIOR PLING DATE: 1999-12-29 PRIOR PLING DATE: 2000-03-17 PRIOR FILING DATE: PA 2000 00440 PRIOR FILING DATE: PA 2000-03-17 PRIOR PLING PRIO
                                                                                                                                                                                                                                                                                                                                                                                                          ..
r 1
                                                                                                                                                                                                                                                                                               Score 275.5; DB 1G; Length 124;
Pred: No. 2.1e-25;
2; Mismatches 2; Indeis 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cuery Match 46.9%; Score 275.5; DB 9; Best Local Similarity 90.9%; Pred. No. 2.1e-25; Matches 50; Conservative 2: Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NOS: 18
FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10, Application US/09736611
Patent No. US20010023069A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRGANISM: N-terminal extension US-09-736-611-10
TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                    Query Match
Sest Local Similarity 90.9%;
Matches 50; Conservative
                                                                                                                                               : CTHER INFORMATION: Synthetic
US-09-894-711-12
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Indels 1: Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Gaps
                                                                                                                                                 Query Match 46.9%, Score 275.5; F5 10; Londth 125-Best Local Similarity 90.9%; Pred. No. 2.16-25; Matches 50; Conservative 2; Mismatches 2; Indels 1-
                                                                                                           Length 125;
                                                                                                                              1::dels
                                                      : LENGTH: 125
TYPE: PKI
: ORGANISM: TA39 leader fused with N-terminally extended
CS-09-740-359-10
                                                                                                       Ouery Match 46.9%; Score 275.5; DB 5; Best Local Similarity 90.9%; Pred. No. 2.1e-25; Matches 50; Conservative 2; Mismatches 2;
                       REQ ID NOS: 16
FastSEQ for Windows Version 4.0
 66/181/450
          PRIOR FILING DATE: 2660-32-10
UNDBER OF SEQ 1D NOS: 16
SOFTWARE: FASTSEQ for Windows SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Synthetic
US-09-894-711-10
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                        RESULT 15
US-09-894-711-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
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Search completed: September 16, 2003, 12:52:26 Job time : 34.7237 sers

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Gentore version 5.116
Copyright (c) 1993 - 2003 Compages Ltd.
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OM protein - protein search, using sw model

September 16, 2003, 12:36:15 ; Search UTP 12:4933 seroids (Without allonments) 825:645 Million cell speatos/sm) Rus on:

US-09-423-100-6 587 1 MEPTIPLSRLFDNAMLRAHR .......IVBQCOTSTOSLYGGENYGN 107

Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 / Gapext 0.5 Scoring table:

283368

283308 seqs, 96168682 residues

Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Cisting first 45 summaries

Database :

PIR\_76:\* 1: pirl:\* 2: pir2:\* 3: pir3:\* 4: pir4:\*

Pred. No. is the number of results predicted by chance to mave a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

		*				
Result	0,100	Ocery	Overy March Length	ě	9	Docarine
	)		in fall and	a :		Description
1	275	46.8	96	~	PC7082	opidermal growth :
7	273.5	46.6	51	-1	I NWH P	
m	273.5	16.6	5.1	r-4	INMHE	insulin - finback
4	273.5	46.5	51	٠.4	INE	insulin - elephant
2	273	46.5	110	?	542179	ä
9	273	46.5	110	2	300178	in
۲.	271.5	46.3	51	- 1	INHY	
90	258.5	45.7	2.5	-	INMESSE	instlin - Sayotian
5	267.5	45.6	51	(4	A59151	instille productor
10	267	€. 10.	110	-	IPHU	togranded unitsut
	267	45.5	110	:\	A42179	ansalin preductor
1.2	263.5	6.44	TS.		INWHIS	Terra just of utilise;
13	263.5	6.44	51	٠.	INGT	11.812 in - 4.545
14	263.5	44.9	51	-	INCMA	tosulto Arrolan
15	263	44.8	84	~	IPPG	insulin producti
16	263	3	0.14		INRS	::
17	262.5	44.7	S	_	COL	insulin - put
18	262	44.6	110	_	TPDC	insuite profits 2
6.	261.5	44.5	51	_	LINKKSO	a nommer - allusa:
20	260	•	116	~	148166	insulin premise
21	258.5	9. 4.4	105	_	IPBO	the property
22	257	•	168	~1	A35983	insults promiser
23	256.5	•		m	500362	insulin North Am
24	255.5	43.5	217	_	STHC	sonalottopia : pre
25	255.5		217	?	167410	Sometoffeet - 110
56	252.5		77	r t	INSH	insulia produrson
27	252	42.9	85		IPHO	insulin precursor
28	251.5	42.8	51	. 1	INCB	insulin - Okinchil
29	250	42.6	108	r: 1	INMS	insulin i precire:

insulin 1 precurso	insulin - goose	insulin 2 precurso	insulin 2 precurso	insulin Il - North	insulin 12 - North	insulin precursor	insulin - crested	insulin - turkey (	insulin - ostrich	insulin - black-be	insulin - slider t	insulin precursor	insulin - Amphiuma	insulin - duckbill	insulin precursor
1PRT1	INGS	IPRT2	INMS2	844469	S44470	I51221	Odni	INTK	SONI	A61129	A6C414	IPCH	861361	563590	IPDK
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_	_	<b>(</b> -)	c	CVI	~	~	-						2	۲٦	٦
0.4	ur:		::	L)	W)	10	S	51	5.	5.1	51	103	UI	w	αn
	42.3														
42.4		42.2	42.2	67.7	ور. دي.	47	41.7	4.7	41.7	47	4	40.8	40.5	40.1	39.8

## ALIGNMENTS

	PESCET 1 FC7082 Gp1082 growth factor/single chain insulin tusion protein - Bacillus brevis (fragr C19Renies: Bacillus brevis
	Croate: 18-Aug-2000 #sequence_revision 18-Aug-2000 #text_change 31-Mar-2003 Cracession: PC7082: PC7083 R:Koh. M.: Haragata, H.: Ebisu, S.: Morthara, K.: Takagi, H. Historian, R.: Bioclechnol, Biochem. 64, 1079-1081, 2006
	ACTIVET USE OIL BOOLLIUS DIEVIS 101 SYNTHENIS AND SECTEULON OIL DES DOU SINGLE-CHAIN ALROTECTED OIL DES DOU SINGLE-CHAIN ALROTECTED OIL DES DOU SINGLE-CHAIN ALROTESTON: PC7082
	A:RC:con.e Lype: DNA A:Rusidues: 1-96 <roh> A:Accession: PC7083</roh>
	A;Moiecule type: protein A;Moidues: 19-26 <ko2></ko2>
	C.sepertes: A.sone: egf-sc. C.supertamily: insuin
	Cuery Match 46.8%; Score 275; DB 2; Length 96; Bost Local Similarity 94.3%; Pred. No. 1.2e-21; Matches 50; Conservative 1; Mismatches 0; Indels 2; Gaps 1;
	Gy 55 RFVNQHLCGSHJVEALYLVCGERGFFYTPKTRGIVEGCCTSICSLYQLENYCN 107
· · · -	3)- 46 FFVNQHLCGSHIVFALYLVGGERGFFYTPKGIVEQCCTSICSIXQLENYCN 96
	PSSULY 2 1XWHP
	insulin - sperm whale
	Cypecies: Figseter catodon (Sperm Whale) Cyfate: 31-Mar-1932 #sequence_revision 31-Mar-1992 #text_change 16-Jul-1999
	Charcession: A99142; A90882 Apshihara: Vir Salte, Tir Ito, Yir Pujino, M.
	Nature 181, 1468-1469, 1958 A.Title: Structure of sperm- and sei-whale insulins and their breakdown by whale pep
	A:Rotereace number: A93142 A:Aocession: A93142
	AtMakepule type: protein Atmakelen 120-31-51 Archa
	R.Barris, J.1., Sanger, P., Naughton, M.A.
	Arch. Biochem. Biophys. 55, 427-428, 1956 Ablitle: Species differences in insulin.
-	Atkersance number: A90082 Atkersance: A90082
	Askojecuje type: protoja
	A) RGSIQUGS: 1750/31-51 CHARN G)Superfamily: Insolis
	increas
_	Fil-30/Domain: insulin crain B #status experimental ABCH>

Query Match

RESULT 3

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Alitle: Sequences of primate insulin genes support the hypothesis of a slower rate. A. Reference number: A42179; MCID:92219953; PMID:1560757
A. Accession: B42179
                                                                                                                                                                                                                                                                                                                                                                                      A.Cross-references: EMBL:X61092; NID:922808; PIDN:CAA43405.1; PID:922809
A.Nore: sequence extracted from NCBI backbone (NCBIN:95185, NCBIP:95194)
A.Preterson. J.D.; Nehrlich, S.; Oyer, P.E.; Steiner, D.F.
J. Biol. Chem. 247, 4866-4871, 1972
A.Trite: Determination of the amino acid sequence of the monkey, sheep, and dog proi A.Reference number: A92111; MCID:72258016; PMID:4626369
A.Reference number: A92111; MCID:72258016; PMID:4626369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lisuil: precursor - crab-cating macaque
Cospecies: Macaca fascicularis (crab-eating macaque)
Cospecies: Macaca fascicularis (crab-eating macaque)
Cospecies: Macaca fascicularis (crab-eating macaque)
Cospecies: J00178
E.M. M.: Groneberg, J.: Leineweber, M.: Wengenmayer, F.: Winnacker, E.L.
Gene, 19, 179-185, 1982
A.:Tile: The nucleotide sequence of cDNA coding for preproinsulin from the primate
A:Recession: J00178; MJJD:R3086474; PMID:6184262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ä
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                     Dispecies: Cercopitherus acthiops (green monkey, grivet)
Chate, 04-Mar-1993 *sequence_revision 18-Kov-1994 #text_change 16-Jul-1999
Chaccesion: B42179; A05232; S16494; S22056
Riselno, S.; Bealt, C. L. L. W.H.
Mell Broot, 9, 193-203; 1992
Affille: Sequences of primate insulin genes support the hymothesis of all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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0.Superfacily: insulin

F:1-24/Pomain: signal sequence #status predicted <SIG>

F:25-54,90-10/Product: insulin #status predicted <ART>

F:25-54/Pomain: insulin connecting C peptide #status predicted <CPT>

F:55-98/Pomain: insulin connecting C peptide #status predicted <CPT>

F:90-110/Pomain: insulin connecting A #status predicted <ARH>

F:31-96,43-109,95-100/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      i; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54 PREVNQHLCGSHLVEALYLVCGERGFFYTPKT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F:57-87/20main: connecting peptide *status experimental *9:90-110/Domain: insulin chain A *status predicted <ACH>F:31-96,43-309,95-100/Disulfide bonds: *status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F:25-54/Domain: insulin chain B *status predicted <BCH> F:25-54,90-110/Product: insulin *status predicted <MAT> F:57-87/Jomain: connecting peptide *status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C:Roywords: hormone; pancreas
F:1-24/Jomain: signal sequence *status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 273; DB 2;
Pred. No. 2.2e-21;
0; Mismatches 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Guery Match
Best Local Similarity 60.29
Matches 53; Conservative
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Best Local Similarity 60.2
Matches 53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Nolecule type: protein
A;Residues: 57-87 <PET>
C;Genetics:
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A:Residues: 1-110 <WET>
                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-110 <SEI>
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C:Superfamily: insulin
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A:Residues: 1-30:31-51 <SM1>
A:Note: the species of elephant is not given, but it is sost probably the turnen elephan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insuln - finback whale (tentative sequence)
C.Species: Baleanoptera physalus (finback whale, common rergual)
C.Species: Baleanoptera physalus (finback whale, common rergual)
C.Accession: 49192 *sequence_revision 31-Mar-1992 *text_change 16-cul-1999
C.Accession: 491918
R.Hama, H.; Titani, K.; Sakaki, S.; Narita, K.
C. Diochem. 56, 285-293, 1964
A.Title: The amino acid sequence in finrwhale insulin.
A.Reference number: A91918
A.Accession: 491918
A.Accession: 491918
A.Residues: 1-36:31-51 (HAM>
C.Superfamily: insulin faturus experimental ARCE>
F.1-30/Janaic: insulin faturus experimental ARCE>
F.1-37/J9-50/Jetalide bonds: #status predicted
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C.Date: 24-Apr-1984 #seguence_revision 30-Sep-1088 #text_thanao 1(1)al-1990
C.Accession: A01584
R.Smith, L.E.
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                                                                                                                                                                                                     Caps
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                                                                                                                                                                                                                                                               56 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRGTVRQCCTSTCSLYGLENYCN 107
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                                                                                                                                    Length 51,
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                              E(31{-}51/Domain; insulin chain A *status experimental -ACH> <math display="inline">E(7{+}37,19{+}50,36{+}41/Dissifide bonds: *status predicted
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C;Kcywords: hormone; pancreas
F;1-30/Domain: insulin chain 5 *status experimental cRCB.
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A;Title: Species variation in the amino acid sequence of
A;Reference number: A90029; MUID:66160119; PMID:5949593
A;Accession: A01584
Fil-30,31-51/Froduct: insulin #status experimental (MA)
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                                                                                                                                 Score 273.5; DB 1:
Pred, No. 8.7e-22;
): Mismatches 1;
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                                                                                                                                    46.68;
                                                                                                                                                               Hest Local Similarity 96.2
Matches 50, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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Matches 50, Conserv
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Query Match

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Query Match

Matches

RESULT 5

Σ

Sep

Tue

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Ricliveira, A.E.A.; Machado, D.L.T.; Gomes, V.M.; Xavier-Noto, J.; Pereira, A.C.P.; Frotein Pept. Lett. 6, 15-21, 1999
A.Title: Jack bean seed coat contains a protein with complete sequence homology to A:Reference number: A59151
A:Refere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       District precursor (validated) - human Nichternate names preprentissula: Profession preprentissula: Profession preprentissula: Homo sapiens (man) C. Species: Ancersion of Manuella: Profession of Manuella: Against Agains Ag
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H.M.; Rutter, W.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.Cross-references: GB.190265; NID:q186429; PIDN:AAA59172.1; PID:q386828 R:Bell. G.I.; Swain, W.F.; Pictet, R.: Cordeil, B.: Goodman, H.M.; Rutter, Ruture 282, 525-527, 1979.
A:Title: Nuclectide sequence of a CDNA clone encoding human preproinsulin. A:Reference number: A93216; MUID:80054779; PMID:503234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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A.Reference number: 493222; Kuld:80120725; PMID:6243748
A.Accession: A93222
A.Molecule type: DNA
A.Rocioule type: DNA
A.Rocioule: 1-110 (ABL)
A.Cross-Peferences: GB:J00265; NID:9186429; PIDN:AAA59172.1; PID:9386828
R.Ullirich, A.; Dull, T.J.: Gray, A.; Brosius, J.; Sures, I.
Science 209-12-15, 1960
A.Tille: Genetic variation in the human insulin gene.
A.Reference number: A94253; MUID:80236313; PMID:6248962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A:Molecule type: mRNA
A:Residios: 2.110 <REL2>
A:Cross-references: GB:Z00265; NID:9186429; PIDN:AAAS9172.1: PID:9386B28
A:Sires: 1.: Goeddel, D.V.: Gray, A.; Ullrich, A.
Science 208, 57-59, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlMolecule type: mRNA
AlResidues: 1-110 <SUR>
Alcross-references: GRIJO0265; NID:9186429; PIDN:AAA59172.1; PID:9366828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A:Title: Nucleotide sequence of human preprofissulin complementary DNA
A:Reference number: A94251; MUID:80147417; PMID:6927846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 51:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E:17.37/Socialn: chain 8 #stolus experimental <CHB> F:41-51/Somain: chain A #status experimental <CHA> F:41-51/Somain: chain A #status experimental <CHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45.6%; Score 267.5; DB 2
92.3%; Pred. No. 3.7e-21;
ive 1; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A:Molecule type: protein
A:Residues: 25-54;90-110 <NTO>
R:Oyer, P.E.: Cho, S.; Peterson, J.D.; Steiner, D.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RENICOL, D.S.E.W.: Smith, D.F.
Nature 187, 483-485, 1960
Affitte: Amino-acid sequence of human insulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 92,3%;
has 48; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A:Reference number: A93144
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A.Mo. coule type: DNA
A. Residues: 1-110 <UL:>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A:Accession: A93216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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N.Alternate names: hypoglycemic agent; plant insulin
C.Species: Canavalia ensiformis (jack bean)
C.Date: 07-Dec-1999 %sequence_revision 07-Dec-1995 %lext.change [10-par-1999]
C.Accession: BS9151, A5915.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-201 35 05
                              PAFVNQHICGSHIVEALYIVCGERGFFYTPK FRREABDFOVGOVELCGGFGAGSIGFLAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56 FVNOHECGSHIVEALYEVGGERGFFYTFKIRGIVEURTSIGSLYGLENYCN 107
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Cispecies: Cricerinae qun. sp. themster)
Cispecies: Cricerinae qun. sp. themster)
Cispecies: 31-Mar-1992 Asequence_revision 31-Mar-1992 attext_change 15-2
Cispecies: A-266
Riveclon, F.A. 1966
Riveclon, F.A. 1966
Riveclon, F.A. 1966
A. Title: Structure of harmore insulin: comparison with a "smor issulation breakence number: A91456
A:Reterence number: A91456
A:Modecule type: protein
A:Residues: 1-30,31-51
C:Superfamily: boxula
C:Keywords: hormone: pancreas
F:1-30,20main: insulin chain B *status experimenta: A678-F:1-30,31-51/Product: insulin a #status experimenta: A678-F:31-51/Domain: insulin chain A #status experimenta: A678-F:31-51/Domain: insulin a #status experimenta: A678-F:31-51/Domain: insulin a #status experimenta: A678-F:37-19-50,35-41/Disulfide boxds: #status predicted
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94.2%; Pred. No. 1.46-21;
5ive 2; Mismatches o; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0: Indels
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Harity 92.3%; Pred. No. 2.9e-2.;
Conservative 3: Mismatches 0
                                                                                                                                                                                       ESSLOKRGIVECCTSICSLYCLENYCN (10)
                                                                                                                                    -----RGIVEQCCTSICSLYQLENYCN 107
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Best Local Similarity 94.2'
Marches 49, Conservative
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nes 48; Conserv
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                                                                                                                               98
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S g g

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Cispecies: Balacnoptera borealis (sci whale)
Cisdet: 13-31-1981 #sequence_revision 13-Jul-1981 #text_change 15-Jul-1999
Ciscession: AC1582
Rishihara, Y.; Saito, T.; Ito, Y.; Fujino, M.
Ratarc 181, 1468-1469, 1558
Airite: Structure of sporm- and sei-whale insulins and their breakdown by whale per Airite: Structure A93142
Airite: Accession: A0182
Airite: Protein
Airite: Protein
Airite: A0181-51 <158>
             Exertise precursor - chimpanzee
Cispectos: Pan tropicalytes (chimpanzee)
Cibate: 04-Mar-1993 sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
Cibate: 04-Mar-1993 sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
Ciscossion: A42179; S22658
Riseloo, S.: Bell, G.I.; Li, W.E.
Anillo Sequences of primate insulingenes support the hypothesis of a slower rate
Anillo Sequences of primate insulingenes support the hypothesis of a slower rate
Anillo Sequences of primate insulingeness support the hypothesis of a slower rate
Anillo Sequence in A42179
Anillo Sequence in A42179
Anillo Sequence extracted from NCBI backbone (NCBIP:95067)
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25 FVNQHLGGSHJVEAL;YLVGGERGFFYTPKTRREAEDLQVGQVELGGSPGAGSLQPLALEG 84
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C:Date: 13-Jul-1981 #sequence_revision 13-Jul-1981 #text_change 16-Jul-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 110;
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3:Knywords: horrone: pandreas

1-130/Commin: insulin chain B *status experimental cACH>

E:1-30.31 51/Product: insulin *status experimental cACH>

E:7-51/Domain: insulin chain A *status experimental cACH>

E:7-37.19-50.36-41/Disulfide bends: *status predicted
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92.3%; Pred. No. 9.6e-21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 ----RGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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Am. J. Med. 40, 662-666, 1966
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best Local Similarity
Matches 48; Cosserv
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C; Superfamily: insulin
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Altitle: Amino acid sequence of the Capptide of human proinsulin.

Altolerum Adild Amino acid sequence of the Capptide of human proinsulin.

Altolerum Adild Amino acid sequence of the Capptide of human proinsulin.

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J. Biol. Chem. 246, 1375-1386, 197;
A:Title: Studies on human proinsulin. isolation and amino acid separate in the human parakeference number: A92075; MCIC:71116410; PMTB:5101771
A:Accession: A92075; MCIC:71116410; PMTB:5101771
A:Accession: Approve procein:
A:Residues: 57-87 <0YE>
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60.5%; Pred. No. 9.3e-21;
tive 0; Mismatches 0; Indels
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                                                                                                                                                                      A;Residues: 57-87 <0YE>
R;Ko, A.; Smyth, D.G.; Markussen, J.; Sundhy, F.
Eur. J. Blochem. 20, 190-199, 1972
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A42179
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completed: September 15, 2003, 12:40:35 as : 12:4903 secs
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C; Species: Cameius drumedarius (Arabian name)
C; Species: Cameius drumedarius (Arabian name)
C; Species: Cameius drumedarius (Arabian name)
C; Accession: A92782
R; Danho, W.O.
J; Fac. Med. Hagidad 14, 16-28, 1972
A; Eference number: A52782
A; Reference number: A52782
A; Reference number: A52782
A; Residues: 1-30:31-51 cDAN:
C; Superfamily: Insulin
C; Superfamily: In
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Best Local Similarity 90.4%; Pred. No. 9.54-22;
Matches 47; Conservative 1: Mismatches 5; Indels
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C,Superfamily: insulin
C;Keywords: hormone: pancrets
F)1-30/Domain: Jouelin chain B Fstatus experimental -BCE-
F)1-30/31-51/Product: insulin restatus experimental -MATP
F)31-51/Domain: insulin chain A *status experimental -ACEP
F)31-51/19-50,36-41/Disuliide bonds: *status predictud
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F1-30,31-51/Product: insulin Estatus experimental FATY-
F31-51/Demain: insulin chain A Estatus experimental ACHP-
F7-37,19-50,36-41/Disultide bonds: Estatus predicted
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Matches 47; Conservative
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A:Title: Proinsulin Actorogeneity in pigs.

A:Reference number: A60835; MUD:89032178; PMID:3181865

A:Accession: A60835

A:Molecule 'type: protein

A:Residues: 33-38-40-62 <SNE>

A:Rosidues: 33-38-40-62 <SNE>

A:Rosidues: 33-62 <SNE>

A:Rosidues: 30-62 <SNE>

A:Rosidues: ARROSID: A:Rosidues: A:Rosidues:
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C.Keywords: hormone: pancreas
Fil-30/Donain: insulin chain B fstatus experimental <BCH>
Fil-30/A4-84/Product: insulin #status experimental <MAT>
Fil-30-63/Domain: connecting peptide #status experimental <CPEP>
Fil-64-84/Pomain: insulin chain A #status experimental <ACH>
Fil-64-84/Pomain: insulin chain A #status experimental
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Gercore version 5.1.6 Copyright (c) 1393 - 2003 Computed Ltd.

Tue Sep 16 14:46:21 2003

OM protein - protein search, using sw model

September 16, 2003, 12:33:30 : Search time 8:32645 Seconds (without allocaments) 604.29° Million cell updates/sear Run on:

US-09-423-100-6

......VEGGGGSIGSLAGIENYGN 167 1 MEPTIPLSRLFONAMLRAHR... Perfect score:

**BLOSUM62** Scoring table: Sequence:

127863 segs, 47026705 residies Searched:

Gapop 16.0 , Gapext 0.5

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match C%

Maximum Match 100% Listing first 45 summarres

SwissProt\_41:\* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

273.5     Query       273.5     46.6     51     INS_BALEH       273.5     46.6     51     INS_BALEH       273.5     46.6     51     INS_BALEH       273.5     46.6     51     INS_BALEH       263.4     46.5     110     INS_BERAR       267.5     46.9     110     INS_BERTR       263.5     44.9     51     INS_BERTR       263.5     44.9     51     INS_BALBO       263.6     44.9     51     INS_BALBO       263.6     44.9     51     INS_BALBO       263.6     44.9     51     INS_BALBO       263.7     44.9     51     INS_BALBO       264.7     44.9     10     INS_BALBO       265.6     44.9     10     INS_BALBO       265.6     44.9     10     INS_BALBO       265.7     43.8     10     INS_BALBO       265.5     43.4     10     INS_BALBO       265.6     43.4     10     INS_BALBO<			æ			SUMMARIES	
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26.2 44.6 110 1 INS_CANFA 26.2 44.3 110 1 INS_CANFA 26.3 43.3 100 1 INS_ERVIN 27.4 3.8 108 1 INS_FACH 25.4 43.4 110 1 INS_FACH 25.5 43.7 51 1 INS_FACH 25.5 5 43.5 217 1 SOMA_HIKAN 25.5 5 43.5 217 1 SOMA_HIKAN 25.5 5 43.4 105 1 INS_CHESP 4 254.5 43.4 105 1 INS_CHESP 25.2 42.9 86 1 INS_CHESP 25.2 42.9 86 1 INS_CHESP 25.3 42.9 86 1 INS_CHESP 25.4 42.9 10 1 INS_CALA 24.5 42.4 110 1 SOMA_SALB 24.6 42.4 217 1 SOMA_SALB 24.6 42.1 217 1 INS_CALA 24.6 42.2 110 1 INS_CALA	14	262.5		51	. 1	INS_FELCA	Ü
6         260         44.3         110         1 INS_CKILD           7         258.5         44.9         105         1 INS_BOVIN           257         43.6         106         1 INS_BORD           9         257         43.7         1 INS_PSADH           0         255.5         43.7         217         SONA_MACNI           255.5         43.5         217         SONA_MACNI           255.5         43.4         207         SONA_PANIR           255.5         43.4         105         1 INS_SEEP           4         256.1         40.4         105         1 INS_CHIRH           255.5         42.6         10.8         1 INS_CHIRH           255.5         42.6         10.8         1 INS_CHIRH           255.5         42.6         10.8         1 INS_CHIRH           256.5         42.4         110         1 INS_CHIRH           256.5         42.4         217         1 SONA_CALA           256         42.4	15	262		:10	٦	INS_CANFA	Canta :
7 258 5 44.9 105 1 INS_BOVIN 257 43.8 108 1 INS_AOTIR 256.5 43.7 51 1 INS_DIDMA 256.5 43.5 217 1 SOMA_HIMAN 255.5 43.5 217 1 SOMA_PANIN 255.5 43.5 217 1 SOMA_PANIN 255.5 43.4 105 1 INS_CREEP 255.5 42.8 108 1 INS_CREEP 250 42.8 108 1 INS_CRIBE 249 42.4 217 1 SOMA_PANIN 250 42.4 110 1 INS_CRIBE 249 42.4 217 1 SOMA_CALIA 249 42.4 217 1 SOMA_CALIA 249 42.4 217 1 SOMA_SANIN 249 42.4 217 1 SOMA_SANIN 248 42.3 11 1NS_ANSANIN 248 42.1 110 1 INS_ANSANIN 248 42.2 110 1 INS_LRAT	16	260		:10	٠.	INS_CRILO	P.C. 47 F. OF 109 U.S.
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0 256.5 43.7 51 1 INS DIDMA 1 255.5 43.5 217 1 SONA_HIMAN 2 255.5 43.5 217 1 SONA_PANIR 4 254.5 43.4 195 1 INS SHEEP 5 255.5 42.4 195 1 INS_CRIEBE 5 251.5 42.8 61 1 INS_CRIEBE 6 251.5 42.8 61 1 INS_CRIEBE 7 259 42.4 110 1 INS_CRIEBE 8 42.4 217 1 SONA_CALIA 1 249.5 42.4 217 1 SONA_SANIR 1 249.5 42.3 110 1 INS2_RAT 2 248 42.3 110 1 INS2_RAT 3 248 42.2 110 1 INS2_RAT	19	257		110		INS_PSAOB	ټ
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2 255.5 43.5 217 : SCMA_MACMI 3 255.5 43.4 105 1 SCMA_PANTR 4 254.5 42.9 86 : INN_HORSE 2 25.5 42.9 86 : INN_HORSE 6 251.5 42.8 51 1 INS_CRIBE 7 250 42.8 10 1 INS_CRIBE 8 249 42.4 110 1 INS_CRIBE 9 249 42.4 217 1 SCMA_CALJA 9 249 5 42.4 217 1 SCMA_CALJA 1 249.5 42.4 217 1 SCMA_SALB 1 249.5 42.3 110 1 INS_CMSAN 2 248 42.2 110 1 INS_CRIA	21	255.5		217	-	SOMA_BUMAN	=
3 255.5 43.5 17 1 SONA_PANTR 254.5 43.4 105 11 NS_SHEEP 254.2 42.9 8.5 11 NS_SHEEP 8.5 12.9 42.4 110 1 NS1_MOUSE 24.9 42.4 21.7 1 SONA_SALB 8.5 11 NS_ANS_N 24.9 42.3 110 1 NS2_MAT 3.7 1 SONA_SALB 8.5 11 NS_ANS_N 3.7 1 NS_ANS_N	22	255.5		217		SOMA_MACMU	• •
4 254.5 43.4 195 1 INS_SREEP 5 252 42.9 86 1 INS_HOKSE 6 251.2 42.9 10.1 INS_HOKSE 7 250 42.6 10.8 1 INS_CRIBB 8 249 42.4 11.0 1 INS_LROJSE 9 249 42.4 217 1 SCRA_SALB 1 249.5 42.4 217 1 SCRA_SALB 1 249.5 42.3 11 INS_ANOISE 248 42.2 11.0 1 INSZ_RAT	23	255.5		217	~1	SOMA_PANTR	
5 252 42.9 86 1 INS_HOREF 6 251.5 42.8 11 INS_CRIBR 7 250 42.6 108 1 INSL_MOJSF 249 42.4 110 1 INSL_MOJSF 9 249 42.4 217 1 SOMA_CALJA 1 248.5 42.4 217 1 SOMA_CALJA 1 248.5 42.4 217 1 SOMA_CALJA 248.5 42.4 217 1 SOMA_SALIB 248.5 42.2 110 1 INS2_MOJSE 248 42.2 110 1 INS2_RAT	24	254.5		501	<b>,</b> –	INS_SHEEP	POINT OF STIES
6 251.5 42.8 51 1 INS_CRIBE 255 42.6 10.8 1 INSI_MOJSE 249 42.4 110 1 INSI_MOJSE 9 249 42.4 217 1 SCMA_CALJA 0 249 42.4 217 1 SCMA_SALIB 1 249.5 42.4 217 1 SCMA_SALIB 1 249.5 42.3 51 1 INS_ANSAN 248 42.2 110 1 INS2_MOJSE 3 248 42.2 110 1 INS2_MAT	25	252		98	٠,	INS_HORSE	POINT Again Calad
7 250 42.6 108 1 INST_MOJSE 8 249 42.4 110 1 INST_RAT 9 249 42.4 217 1 SOMA_CALJA 0 249 42.4 217 1 SOMA_SALHS 1 248.5 42.3 51 1 INST_MOJSE 248 42.2 110 1 INSZ_MAT 3 248 42.2 110 1 INSZ_MAT	56	251.5		5.1	, <b>-</b> 1	INS_CHURR	
8 249 42.4 116 1 INSI_RAT 9 249 42.4 217 1 SYMA_CALJA 0 249 42.4 217 1 SCHA_SALBB 1 248.5 42.3 51 1 INS_MOUSE 2 248 42.2 110 1 INSZ_MOUSE 3 248 42.2 110 1 INSZ_MAT	27	250	Ġ	108	_	INST_MOUSE	P01325 mas m.scu
9 249 42.4 217 1 SOMA_CALJA 0 249 42.4 217 1 SOMA_SALIBB 1 248.5 42.3 21 1 INS_ANSAN 2 248 42.2 110 1 INS2_MOUSE 3 248 42.2 110 1 INS2_MAT	28	249		110	-	INS1_RAT	PO1322 : attus :: 22
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2 248 42.2 110 1 INS2_MOUSE 3 248 42.2 110 1 INS2_RAT	31	248.5		51	-	INS_ANSAN	POT454 anser anser
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	33	248	42.2	110	-	INS2_RAT	POISSS rathes more

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INS_ACIGU	"NS_SELRF	INS_HYSCR	INS_TRASC	INS_CHICK	SOM2_PANTR	INS_ORNAN	INS_ANAPL	INS_ALLMI	INS_LEPSP	:NS_ZAODH	SOM2_HUMAN
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52	103	in in	5.	107	217	51	81	27	52	51	217
41.9	41.7	41.7	41.7	8.04	40.2	1.04	39.8	39.4	39.4	38.9	38.8
246	573	244.5	244.5	239.5	236	235.5	233.5	231.5	231	228.5	228
34	un en	3	3.7	(1) (*)	ij) (r)	0.5	Ξ.	: NI *3*	7' • 7		u)

### ALIGNMENTS

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**Species differences in insulin ": Arch. Bioches differences in insulin ": Arch. Biochem Biophys. 65.427-438(1956).

-:- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND FATTY ACIDS. "T. ACCELERATES GLYCOLYSIS, "THE PENTGSE PHOSPHATE CYCLE," AND GLYCOGEN SYMTHESIS IN LIVER.

-:- SUBUNIT: HETEROTIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPECIES-P.catodon;
Shichara Y., Saito T., Ito Y., Fujino M.;
"Structure of sperm- and sei-whale insulins and their breakdown by
whale pepsin."
                                                                                                                                                                                                       Balaknoptera physalus (Finback whale) (Common rorqual), and
Physiter catodon (Sporm whale) (Physoter macrocephalus).
Bukaryota: Metazoa, Ghordata: Craniald, Vertebrata, Euteleostomi,
Balaknopteridae, Octanticdactyla; Cetacea, Mysticeti:
Balaknopteridae, Balanoptera.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9007B514691A7CDD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPECIES=B.physalus;
isuma B., Titani K., Sakaki S., Narita K.;
"The amino acid sequence in fin-whale insulin.";
J. Biochem. 56:285-293(1964).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INSULIN A CHAIN.
INTERCHAIN.
INTERCHAIN.
                                                      21.301.1986 (Ref. 31, Greated)
21.301.1986 (Ref. 31, Last sequence update)
31.60T-1996 (Ref. 34, Last ansotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insulin family: Hormone, Glucose metabolism.
CHAIN 1 30 INSULIN B CHAIN.
51 AM.
   PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 181:1468-1469(1958)
   STANDARD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART: SM00078: ILGF:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFIDE BONDS
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51 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPECIES-P. catodon;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR; A91918: INWHF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; A93142; INWHP.
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INS_BALPH
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<u>....</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.82222
                                                                                                                                                                                                                                                                                                                 "Species variation in the amino acid sequence of insulin.";
Am. J. Med. 40:666.1966;
-1. FUNCATION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND
FATTY ACIDS. IT ACCELERATES GIVEOLYSIS, THE FENTOSE PHOSPHATE
CYCLE, AND GIVEOGEN SYNTHESIS IN LIVER.
CYCLE, AND GIVEOGEN SYNTHESIS IN LIVER.
SCHUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                 DISJLFIDE BONDS.
--- SURCELLUIAR LOCATION: Secreted.
---- MISCELLANECCE: THE SPECIES OF ELEPHANT IS NOT GIVEN, BUT IT IS NOT PROBABLY THE INDIAN ELEPHANT (FLEPHAS MAXIMES).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cercopithecus aethiops (Green monkey) (Grivet).
Eukaryota, Metazoa: Chordata, Craniata, Vertebrata, Eutoloostom!;
Mammalia, Eutheria: Primates, Catarrhini; Cercopithecidae;
                                                     56 FVNOHLGOSHLYBALYLVGBERGFFYTPKTR3TVEGOTFSLTSTYGLENICY 107 LT. 111 - 111 - 111 - 111 - 111 - 111 - 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56 FVNQHLCSSHLVEALYLVCGERGFFYTPKTRGIVEQINTSIGSINQLEMYTN 103
                                                                                                                                                                                                                     Elephas maximus (Indian elephant).
Eukaryoda: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Proboscidea; Elephantidae: Elephas.
NCBI_TaxID-9783;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FVNQH.GGSELVEALYLVGGERGEPYTPKT-4TVEGY-TVVCS: YOLDWEY 91
                                                                   I FVNOHLGGSHIVBALYLVGGRRCFFYTPRA-GLVSOGTSTOSLYGARYCN 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 274.5; Call Length 5);
Pred. No. 1.6e-22;
3: Mismatches ; indels :
         DA 1: Length 51:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SIMILARLIY: BELONGS TO THE INSULINZIGEZERLAXIN FAMILY.
HSSP: P01308: 1A10.
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       46.6%; Score 273.5; 38 3; 96.2%; Pred. No. 1.69 22; dive 0: Mismatches 3;
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01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
01-FFB-1995 (Rel. 33, Last ennotation update)
                                                                                                                                                                          Last sequence update;
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INSULIN B CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INSULIN A CHAIN.
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SMART; SM36078: T.GF: 1.
PROSITE: PS00262: INSULIK: 1.
                                                                                                                                         P.Y.T.
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                                                                                                                                                             01, Created)
01, Last seque
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Conservative
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                                                                                                                                        STANDARD;
                   Best Local Similarity
Matches 50, Conserv
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21-JUL-1986 (Rel.
01-FEB-1996 (Rel.
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PC1316;
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DT _01-AP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SECURNCE OF 57-87.
SECURNCE OF 57-87.
SECURNCE OF 12-8. Oyor P.E., Steiner D.F.;
Potorson 5.D., Nehrlich S., Oyor P.E., Steiner D.F.;
Potorson 5.D., Nehrlich S., Oyor P.E., Steiner D.F.;
Potorson 5.D., Nehrlich S., Oyor P.E., Steiner D.F.;
Secremination of the amino acid sequence of the monkey, sheep, and
"Determination of the amino acid sequence of the monkey, sheep, and
"Determination of the amino acid sequence of the monkey, sheep, and
"Determination of the amino acid sequence of the monkey, sheep, and
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J. BDL. Charlow. 17:4866-4871(1972).
-!- FUNCTION: INSUL'N DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELI, PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS AND
FRAITY ACCELERATES GIFCOLYSIS, THE PENTOSE PHOSPHATE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                   MENLINE-92219983: PubMed 1560757;
Setion S., Bell G.E., H.W.,
"Sequences of primate Insulin genes support the hypothesis of
slower rate of melecular evolution in humans and apes than in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 273; DB 1; i.ength 110; Pred, No. 4.1e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -:- SUBCELLULAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
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Ptam: PF0049; Insulin: 1.
Ptam: SMC0056; Infer 1.
PROSITE: PS00262; INSULIN: 1.
Insulin family; Hormone: Glucose metabolism; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INS_MACFA STANDARD; PRI; 110 AA. P30406; P01309; 21-301-1986 (Rel. Cl. Created) 13-AGC-1987 (Rel. 05, Last sequence update) 01-FEB-1996 (Rel. 33, Last annotation update) Insulin precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INSULIN B CHAIN
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INSULIN A CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTERCHAIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mol. Biol. Evol. 9:193-203(1992).
Geroup: the cisae; Geroop: thecus.
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PTR: B42179; B42179.
HSSP: P01308; 1A16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.5%;
60.2%;
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Watches 53: Conservative
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Mammalia: Eutheria: Rodentia: Sciurognathi; Muridae: Murinae: Acomys.
NCBI_TaxID=10068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
35-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INSULIN B CHAIN.
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Insulin family: Hormone: Glucose metabolism.
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Nature 284:26-32(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Interpret 1PR004825; Ins/INF/relax.
SMART: SM00078; INGP: 1.
                                                                                                             MEDLINE-72189454; PubMed-5028210; Buenzli H.F., Humbel R.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECUENCE FROM N.A.
MEDLINE-80054779; Pubmed-503234;
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37
50
41
5768 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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HSSP; P01308; 1TYM.
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48; Conserv
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                                                                                   COMPOSITION
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through nothurorable between the Swiss Institute of Blobsformatics and the EREL outstaffed the European Blobsformatics institute. There are no institutions on the use by non-profit institutions as long as its content, is in the way modified and this statement is not removed. Tsage by and tor commercial entities requires a license agreement (see http://www.isb-s.b.ci/Announce/or send as email to licenselish-s.b.ch).
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23 PAFVNOHLGGSHLVEALYSVIGERGERYTPRYTRREASDEGVOQVELGGGGRADNLOFIDAL
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                                                                                                                                                                                                                                                                                                                                                                           -:- ENCOLON- INSULAN DEDREASES BLOOD GLUCOSE CONDENTRATION. IT INCREASES CELL PERREABILITY TO KONGSACCHARIDES. AKINO ACTUS AND FAUTY ACTOS. IT ACCELERATES GIVENCLYSIS, THE PENTOSE PHROBENER CYCLE, AND GLYCOGEN SYNTHESIS IN LIVES.

-:- SOBGUIT: HETEROSIMER OF A B CHAIN AND AN A CHAIN LINKED PY TWO
                                                                                                                                                                                                               MEDLINE-81080474: PubMed-6184262;
Wetckam W., Groneberg J., Leinoweber M., Wongemmayer F.,
Winnacker B.-5.;
The nucleotide sequence of cDNA coding for preprofitsuils time the
primate Macaca fasciculatis.";
Gene 19:179-183(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acomys cabirinus (Egyptian spiny mense).
Eukaryota: Metazba: Chordatu: Craniatu; Vertebratu: Butelcustam.;
                                                      Eukaryota, Motazoa: Chordata; Craniata; Vertebrata; Estelmostomi;
Mammalia; Eutheria; Etimates: Catarthin: Cercopithoridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
...
                            Macada fascicularis (Grab eating madaque) (Cynomolgus monkey)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- SUBCELLULAR LOCATION: Societed.
-1- SIMITARITY: BELONGS TO THE INSCITUZION/MELAKIN PARTITY.
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HGNAL 1
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INSULIN À CHAIN.
INTERCHAIN.
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Mammalia, Euthoria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=5606;
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Rutter W.J.;
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Bell G.L., Piccer R.C., Kutter W.J., Cordoll B., Tischer H.,
Goodman H.M.;
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--- SURCELLULAR LOCATION: Secreted.
--- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
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3; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                 the human pancreatic C-peptide."
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Nicol D.S.H.W., Smith D.F.,
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MEDLINE, AND 10-73,
MEDLINE, AND 10-63,
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Proc. Natl. Acad. Sci. U.S.A. 80:7390-7354(1983)
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MEDLINE-87056122; PubMed+3537011;
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MEDLINE=85261996; Pubmed-4019786;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VARIANT KYOTO LEU-89.
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or send an email to licenseelsb-sib.ch).
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                                             EMBL: X61089; CAA43403.1; ".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Chery Match
Post Local Similarity 60.5
Matches 52; Conservative
                                                                                                                                                                                                                                                   24
84
87
110
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                                                                    PIR: A42179; A42179.
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57
83
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17
7A;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Institu precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=43179;
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PROPEP
CHAIN
DISUDFID
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LISCLEID
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:NS_SPETR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is preduced through a collaboration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 FVNQHDGGSHBVEALXDVGGERGFFYTPXTRREAEDHJVGQVEDGGGFGAGSTGRCALEG AG
                                                                                                                                                                                                                                                          "Comparative 20 NMR studies of human insuling and desepondappings insuling sequential resonance assignment and implications for professing dynamics and receptor recognition.":

Biochemistry 30:5505-5515(1391).
                                                              Hua O.-X., Reiss M.A.;
"Toward the solution structure of human insular sequential 20 18 NBS
assignment of a despendapeptide analogue and comparison with organal
structure.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sans
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INCREASES CELL PERMEABLITY 10 MONOSACCHARITES, ANINO ACIDS AND
FAITY ACLOS. IT ACCENEARES GLYCOLYSIS. HE PERMOSE PHYSHMID:
CYCLE, AND GLYCOCADE SYMPHESIS IN LIVER.
-!- SUBGNIT HETENODIMER OF A B CHAIN AND AN A CHAIN CLINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                    Hua G.-X., Weiss M.A.: Two-dimensional NMK studies of Des-(526-930)-(swills: sequence-specific resonance assignments and effects of solvest exposition. Blochim. Blochim. Blochim. Blochim.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazba, Chordata, Craniata, Vertebrata, Eutoleosteni:
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDAMED-1560757; MEDICE FROM N.A. MEDICE S., Hell G.T. L. M.: M. L. M.: "Sequences S. Primate insul.n genes support the hypothesis of shower rate of molecular evolution in number and apes than in slower rate of molecular evolution in number and apes than in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR ACCATION: Secreted. SIMILARITY: HELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56 FUNQHICGSHLUMRALYLVCGERGFFYTPKT------
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Prod. No. 1.86-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-APR-1993 (Rel. 25, Created)
01-APR-1993 (Rel. 25, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0: Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 ----RGIVEQCCTSICSLEQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SLOKRGIVEQCCTSICSS/2QLENYCW 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                          STRUCTURE BY NMR.
MEDLINE~91265527; Pubmed+1646635;
                                           MEDLINE-91104966; PubMed-2271664;
                                                                                                                                                  Biochemistry 29:10545-:0555(:990)
                                                                                                                                                                                                                     MEDLINE-91242467; PubMed=2036420;
Hua Q.-X., Weiss M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9:193-203('992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 60.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
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                                                                                                                                                                                                STRUCTURE BY NMR.
                      STRUCTURE BY NMR.
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P30410;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way rouitied and Lois statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tredrea M.M., Buck M.J., Guhaniyogi J., Squire T.L., Andrews M.T.,
"Regulation of PDK4 expression in a hibernating mammal.";
Submitted (JUN-2001) to the EXBL/GonBank/DBUJ databases.
-!- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACIDS ANI
EATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENIOSE PHOSPHAIE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SYBGNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
DISGLEDE BONDS.
                                                                                                                                                                          PROSITE: PS00262; TMSCLIN: 1.
Insuiin family: Hormone; Glucose metabolism; Signal; 3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Spermophilus tridecemlineatus (Thirteen-lined ground squirrel).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Sciuridae, Sciurinae,
Spermophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 130;
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-!- SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41EB8DF79837CEF5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 267; DB 1; L
Pred. No. 1.8e-21;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INS_SPETR STANDARD; PRT; 110 AA. 091X13; 15.5FP-2003 (Rel. 42, Last sequence update) 15.5FP-2003 (Rel. 42, Last annotation update) 15.5FP-2003 (Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                        INSULIN A CHAIN.
                                                                                                                                                                                                                                                                                        INSULIN B CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45.5%; Score 267;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56 FVNOHIGGSHLVEALYLVGGERGFFYTPKT-
                                                                                                                                                                                                                                                                                                                                                                                                                           INTERCHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85 SLOKRGIVEOCUSICSLYQUENYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86 ----RGIVEQCCTSICSLYQLENYON 107
                                                                                                                                                                                                                                                                                                                        C PEPTIDE.
PDB: TEFE; 29-MAR-60.
InterPro; TRR004825: Ins/1GF/re:ax.
Pram: PF00649; Insilin: 1.
PR0EM: PR00277: INSULINE.
SWART: SW0C078: ILGF: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12025 MW;
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HSSP: P01308; 11NP.
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21-57L-1986 (Rel. 21, Created)
21-57L-1986 (Rel. 01, Last Sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
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                                                                                                                                                                                                                                                                                                                                                                                                  INTERCHAIN.
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SMART: SM00078; ILGE; 1.
PROSITE; PS00262; INSULIN; 1.
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                                                                      PRT;
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Smith L.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                44.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                             5693 MW;
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Best Local Similarity 90.4-
Best Local Similarity 90.4-
Free 47: Conservative
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NCBI_TaxID-9925;
                                                                     STANDARD:
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                                                                                                                                                                                                                                                                                                            PIR; A92782: INCMA
HSSP: P01317; 21NS
                                                                                                                                                                                                                                                                                                                                                                                                                             51 AA:
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01-FEB-1996
                                                                                                                                                                                              Danhe W.O.;
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                                                                     INS_CAMDR
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ID INS_C
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INS_CAPHI
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Mature 1811:468-1469(1958).

-1- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRALE'N, IT INCREASES CELL PERMEABLILY TO MONOSACCHARLES. AMIN' ACHES AND FATTY ACIDS. IT ACCELERATES GLYCOLYSIS, THE PENTOSE PHOSENATE CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.

-1- SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LIKKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                  Ishihara V., Saito T., Ito Y., Fujino M.; "Structure of sperm- and sei-whale insulins and their breakcom, by whale pepsin.";
                                                                                                                                                                                                                                                                                                                                          Balacnoptera borealis (Sel Abaio).
Bukaryota, Metazoa; Chordata; Craniata; Verrebrara; Euteleostomi;
Mammalia; Butheria; Cetarticóactyla; Cetacea; Mystloeti;
Balacnopteridae; Balacnoptera.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ...
                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1: Length Si;
                                                                                                                                      Length 110:
                                                                                                                          -:- SUBCELLULAR LOCATION: Secreted.
-:- SIMILARIIY: BELONGS TO THE INSULIN/1GE/RELAXIM FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                    INJERCHAIN (BY SIMILARITY).
INTERCHAIN (BY SIMILARITY).
BY SIMILARITY.
4511768E6622EEES GRO64;
                                                                                                                                                                         50 LGTGP--REVNOHLGGSHIVEAL/YLVGGERGFFYTPKT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9007B50R400A7DDD CRC64;
                                                                                                                                                                                                                         77 PQPLALEMALQKRGIVEQCCTSICSLYQEBYCN 310
                                                                                                                                                                                                               -------RGIVEOCCISICSLYQLENYCN 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 263.5; DB 1
Pred. No. 1.9e-21;
                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
01-OCT-1998 (Rel. 34, Last annotation update)
                                                BY SIMILARITY.
INSULIN E CRAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INSULIN A CHAIN.
                                                                            INSULIN A CHAIN
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                                                                                                                                                                                                                                                                                51 A.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SMOG78; 11GF; 1
PROSITE; PS00262; INSTITU: 1.
Insulin family; Hormone; Glucuse metabolism
CHAIN 1 50 INSULIN HIGHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
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                                                                    C PEPTIDE.
                                                                                                                                                                                                                                                                                PRT;
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                                                                                                                  12004 MW;
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92.38;
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         PRINTS: PR00277; INSULING. SMART; SM00078; IJGF; I. PROSITE; PS00262; INSULIN; Insulin family; Hordone; T.
                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                STANDARD;
Pfam; PF00049; Insulin;
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37.
50.
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HSSP; P01317; IAPH.
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                                                                                                                 11C AA;
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                                                          INS_BALBO .
P01314;
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Best Local Simi
Matches 54;
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SEQUENCE.
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CHAIN
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                                                                                               DISULFID
                                                                                                                 SEQUENCE
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                                                                                                                                                                                                                                                                                                                               Insulin.
                                                         CHAIN
PROPEP
                                                 SIGNAL
                                                                            CHAIN
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Gaps
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J. Fac. Med. Baghdad 14:16-28(1972).
J. Fac. Med. Baghdad 14:16-28(1972).
-!- FUNCTION: INSULIN DECREASES BLOOD GLUCOSE CONCENTRATION. IT
:NCHEASES CELL PERMEABILITY 10 MONOSACCHARIDES, AMINO ACIDS AND
FRATY ACCELERATES GITCOLYSIS, THE PENIOSE PHOSPHATE
CYCLE, AND GLYCOGEN SYMTHESIS IN LIVER.
-!- SUBGNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Capra hircus (Goat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Camelus dromedarius (Dromedary) (Arabian camel).
Sukaryota: Metazoa; Chordata; Craniata; Vertebrata; Eutelcostomi;
Mammalia; Eutheria; Cetartiodactyla; Tylopoda; Camelusia; Cynelus; VCBI_TaxID=9838;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    56 FVNQHECGSHEVEALYEVCGERGFFYTPKIRGIVEQCCTSICSEYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FANOHIGGSHEVEALYINGERGFFYTPKA-GIVEGCASVGSLYQLENYCN 51
                                                                                                                                                                                                                                                                                                       The isolation and characterization of insulin of camel (Camelus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: RELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 263.5; DB 1; Length
Pred. No. 1.9e-21;
L: Mismatches 3; Indels
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3 INS:
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3MTE;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51NS;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDE;
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PDB;
PDB;
PDB;
PDB;
PDB;
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PDB;
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                                                                                                                                                                                                                           Gaps
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
SUBUNII: HETERCDIMER OF A B CHAIN AND AN A CHAIN LINKED BY IWO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Comparative sequence analysis of the INS IGF2-819 gene cluster in
                                                                                                                                                                                                                                          56 FVNQHLGGSHLVEALYLVGGRRGFFYTPKTRGTVH; YGTSTTSLYGDANYTN 10.7
                                                                                                                                                                                                                                                                                                                                                                      Eukaryota: Metázoa: Cherdata: Craniata: Vertebruta: Entelevistomi;
Mammalia: Eutheria: Cetartiodactyia: Suina: Suidae: Sus
                                                                                                                                                                                                                                                  141.0141.0131.00.1110.1110.1110. 111. 11. 0.111. 111. 111. 1. EVNOHEGGSHLVERALVIANGEREFETTERA GIVEGOGAGVOSLYGENEUER 91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-68286485; PubMed S657063;
Chance R.E., Ellis R.M., Bromer W.W.;
*Portine proissilin characterization and amino unid sequence.";
Science 16::165-167(1968).
                                                                                                                                                                                                                           ...
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HEDLINE=22135958; PubMed-12140686;
Amarger V., Ngiyen M., Laeke A.S., Braunschweig M., Nezer C.,
Georges M., Andersson L.;
                                                                                                                                                                                                       Score 268.5: Della Landla 51:
                                                                   -:- SUBCELLOGAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE INSULIN/IOF/RELAXIN FAMILY.
PIR: A01586. INST.
HSSP, P01317: LAPH.
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or β; fadels
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"Complete porcine proproinsalin cENA sequence.":
Submitted (MAY-1998) to the EMBL/Genbank/DDBJ databases
                                                                                                                                                                                        9007B50GD84E7CDD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS).
Blundell T.L., Fodson G.G., Hodgkin D., Mercela F.,
                                                                                                                                                                                                                                                                                                           P01315, Q9TSJ5;
21-JUD-1986 (Rel. 01, Created)
16-CCT-2001 (Rel. 40, Last Sequence update)
28-PEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                       INSULIN A CHAIN.
INTERCHAIN.
INTERCHAIN.
                                                                                                                                       INSCILN B CHAIN.
                                                                                                                      PROSITE: PS00062; INSULLN: 1.
Insulin family: Hormone: Glucose metabolism.
                                                                                                                                                                                                                                                                                                      108 AA
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                                                                                                                                                                                                                   Pred. No. 1
                                                                                                                                                                                                                                                                                                      1120
                                                                                                     Interpro: 1PR004825: Ins/18F/relax.
SMART: SM00078: TiGF: 1.
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                                                                                                                                                                                                         44.98,
90.48,
                                                                                                                                                                                       5692 MM.
                                                                                                                                                                                                                          47: Conservative
                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                200
                                                           DISULFIDE BONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 25-108.
                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                              Insulin precursor.
                                                                                                                                                                      19
36
51 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SECUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                               scrofa (Pig).
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Chance 8.E.:
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              this SKISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                    MFDLINE-69099338; PubMed-2905485; Baker E.N., Biundell T.L., Cutfield J.F., Cutfield S.M., Dodson E.J., Poaker E.N., Biundell T.L., Cutfield J.F., Cutfield S.M., Dodson E.J., Poaker G., Growinst Hodgkin D.M., Hubbard R.E., Isaacs N.W., Fergioids C.D., Sakabe K., Sakabe N., Vijayan N.M., "The structure of 222 pig Insulin crystals at 1.5-A resolution."; Philos. Trans. R. Soc. Lond., B. Biol. Sci. 319:369-456(1989).
                                                                                                                                                   Isaacs N.W., Agarwal R.C.; "Experience with fast Fourier least squares in the refinement of the crystal structure of rhombohedral 2-zinc insulin at 1.5-A resolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NOTE-Issue 9 of April 2001;
WWW."http://www.expasy.org/spctlight/articles/sptit009.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MESSINE-91222450; PubMed-2025410; Badger J., Harris M.R., Reynoids C.D., Evans A.C., Dodson E.J., Dodson G.G., Morth A.C.T.; Structure of G., Worth A.C.T.; Acta Crystallogr. B 47:127-136(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X-RAN CRYSTALLOGRAPHY (2.0 ANGSTROMS).
MEDLINE=92126286; PubMed-1772633;
Ralschmidt P., Hansen F.B., Dodson E., Dodson G., Korber F.,
"Structure of parcine insulin cocrystallized with clupeline Z.
Acta Crystallogr. B 47:975-986(1991).
"Insulia, The structure in the crystal and its rellection in chemistry and biology.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBSELIGLAR LOCATION: Secreted.
SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DATABASE: NAME-Frotein Spotlight;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X-RAY CRYSTALLOGRAPHY (1.65 ANGSTROMS)
                                                                                                                     X-RAY CRYSTALLOGRAPHY (1.5 ANGSTROMS).
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                                                                                                                                                                                                                                                                                  Acta Crystallogr. A 34:782-791(1978).
                                                          Adv. Protein Chem. 26:279-462(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X-RAY CRYSTALLOGRAPHY
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01-APR-98.
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16-FEB-99.
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-!- SIMILARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11838 MW;
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EMBL: M01153; AAA17840.13 -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44.8%;
ilarity 59.3%;
Conservative
                                                                                                                                                                                                                                                                                  SMART: SM00378; IlGF; l.
PROSITE; PS00262; INSULIN;
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                                                                                                                                                                                                                                                                                                                                         24
54
87
110
109
100
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DISULFIDE BONDS.
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57
90
31
43
43
83
110 AA;
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es 51: Conserv
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SEQUENCE
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PROPEP
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Matches
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INS_FELCA
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                                                                                                                                                                                                                                                                                                                                                                                                             Saps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 56-119 FROM N.A.
Giddings S.J., Carnadhi L.R., Devaskar S.D.,
Submitted (AFR-1991) to the EMBL/GenBank/JOHJ Galdhasos.
-!-FUNCTION: INSULN DECREASES BLOOD GIDCOSE CHNCHMEATION. 1T
INDREASES CELL PERMISHELLIY TO MONOSACHABIDES, ABENE ACIDS, IT ACCELERATES GLYCOLYSIS, THE FENVOSE PHUSHAFE
CYCLE, AND GIYCOGEN SYNTHESIS IN ITVER.
-!-SUBUNIT: HETERODIMER OF A B CHAIN AND AN A CHAIN LINKED BY TWO
DISULFIDE BONDS.
-!-SUBCELLUIAR LOCATION: Secreted.
                                                                                               Insulin family, Hormoner Giudese metabolismo Somao, No structure.
SIGNAL 1 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryctolagus cuniculus (Rabbit).
Eukaryota, Metazoa, Chordata: Craniata; Vertebrata: Entoleostomi:
Mammalia: Eutheria, Lagomorpha, Leporidae: Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                           32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-New Zealand white: TISSCB-Pancreas:
MEDIARE-94179230; PubMod-8122571;
Devaskar S.U., Galdings S.J., Rajakomar P.A., Carnethi D.R.,
Menon R.K., Zahm D.S.;
                                                                                                                                                                                                                                                                                                                                                                       Score 263; DR 1: Length 108;
Pred. No. 4.5e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Species variation in the amino acid sequence of insulin.
Am. J. Med. 40:662-666(1966).
                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                     11671 MW; CB4491B429858EBE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. Gi, Created)
01-FEB-1996 (Rel. 3). Last sequence update)
01-0CT-1996 (Rel. 34, Last annotation update)
                                                                                                                                                            C PEPTIDE.
INSCLIN A CHAIM.
INTERCHAIM.
                                                                                                                                          INSULIN S CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                              56 FVNQHLCGSHLVEALYLV3GERGFFYTPKT-----
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                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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(HILL | HITLIHITE
85 QKRGIVEQCCISICSLYQLENYON 108
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                                    InterPro: IPR034825: Ins/IGF/relax
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                                                                                                                                                                                                                                                                                                                                                                        44.88;
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MEDLINE=65160119; PubMed-594
                                                                                        PS00262: INSULIN:
                                                 Pfam, PF60649, Insulin, 1.
SMART, SM00078, 11GF, 1.
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                           224
858
1008
1004
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                    28-JAN-9E
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Matches 51; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Insulin precursor
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                  PDB; 12NJ;
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P01311;
                                                                                                                                          CHAIN
PROPEP
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This SWISS-PROF entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota; Metazoa; Chordata; Craniata; Vortebrata; Exteleostomi;
Marmalia; Eutheria; Carnivora; Pissipedia; Felidae; Felis;
NOBI_TAXID-9605;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; DB 1; Length 110; 4.6e-21;
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!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E -> Y (1N REF. 3).
82D2975385D77FA8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                      Insulin family; Hormone; Glucose metabolism; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JAN-1986 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     INSULIN B CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INSULIN A CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56 FVNQHLCGSHIVEALYINCGERGFFYTPKT----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENTERCHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95 ALOKRGIVEQCCTSICSLYQLENYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86 ----RGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C PEPTIDE.
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HASSP: POL317; IAN-
INCECPIC; IPROC4825; INS/IGF/FELAX.
PRINTS; PRO0277; INSULINB.
                                                                                                                                                                                                                                                PTK, A53438; INRB.
HSSP: P01308; ITYM.
THEEPED: IPROCMESS; INS/IGE/FECIAX.
PIGHT: PP00045; INSULIN: 1.
SMART: SM00378; ILGF; 1.
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us-09-423-100-6.rsp

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Search completed: September 16, 2003, 12:38:51 Job time : 9.32685 secs
                E L L L L S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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Am. J. Med. 40:652-666(1966)
-!- FUNCTION: INSULIN DEFENSES HLOOD GLOCOSE CONCENTRATION. ::
INCREASES CELL PERMEABILITY TO MONOSACCHARIDES, AMINO ACLUS AND FATTY ACCES. FARS CURCOANSIS, THE PENTOSE PHOSEHATE
CYCLE, AND GLYCOGEN SYNTHESIS IN LIVER.
-!- SUBUNIT: HETERODIMEN OF A B CHAIN AND AN A CHAIN LINKED BY TWO
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MEDLINE-83109571: PubMcd-6296142:
MEDLINE-83109571: PubMcd-6296142:
"Cloning and own S.J. Seiner D.F.;
"Cloning and own-excide sequence analysis of the dos insulin argue.
Coded amino acid sequence of canine preproinsallin predicts an additional C-peptide fragment.";
J. Biol. Chem. 258:2357-2363(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56 PVNOHLGGSHLVBALKTAVGBRGEFYTPRTRGIVGENTTSTESLYGLERVYN 107 I 11 I 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
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Eukaryota: Metazoa, Chordana, Crabiata: Velimpatu: Entulooston:
Mammalia: Eutheria: Carniyora, Fissipedia: Canidar: Canis.
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-:- SUBCELLULAR LOCATION: SACRETED.
-:- SIMILARITY: BELONGS TO PHE INSULIN/IGF/RELAXIN FAMILY.
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PIR; A92413; 1202

FIR; A92413; 1202

InterPro: TPR004825; Ins/IGF/relax.

Pfam; PF0049; Insulfo; 1.

PROSITE; PS00262; INSTLIN; 1.

Insulin family; Hormone; Glicese metabolism: Signal.
                                                                                                                                                                                                                                                                                                                                                             9007B5096A0A7DDD CR064;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 262.5: PP | Pred. No. 2.4e+21:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-001-1966 (Rel. 0), Created)
21-001-1966 (Rel. 0), Last Sequence update)
01-FBB-1966 (Rel. 3), Dast ampotation update)
SMAK; SMCC78: ILCF; 1.
PROSITE; PS00262; INSULIN; 1.
CHAIL: Annily; Hormone; Glecose metabolism.
CHAIN.
30 INSULIN B CHAIN.
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SEQUENCE OF 25-54 AND 90-110.
MEDLINE-66160119; PubMed-5949593;
                                                                                                                                                                                                                                                                                                                                                                                                                                           44.78:
90.48:
                                                                                                                                                                                                                                                                                                                                                         5745 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47; Conservative
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                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                             51 AA;
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        DR KW KW FT FT FT FT FT FT SC SC SC
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56 FVNQHLCGSHLVEALYIVCGERGFFYTPKT----------------------
                                                                                                                                34; Gaps
                                                                                                      Score 262; DB 1; Length 110;
Pred. No. 5.9e-21;
0; Mismatches 1; Indels
54 INSULIN B CHAIN.
87 C PEPTIDE.
110 INSULIN A CHAIN.
96 INTERCHAIN.
109 INTERCHAIN.
1100
1, 12190 MW, A574791864A4FB96 CRC64;
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                                                                                                      44.68;
59.38;
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hest Local Similarity 59.50
hest Local Si Consorvative
 25
57
90
93
43
95
120 AA;
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GenCore version 5.1.6
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Compagen 1.a.		
2003		
1		
: 993		
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OM protein - protein search, using sw model

Soptember 16, 2003, 12:34:00; Swarch time 25:81:2 Seconds (without alignments) 1669:676 Million cell updates/sec Run on:

US-09-423-100-6 587 1 MEPTIPLSRLEDMAKIRABR ......IVBCCOISIOSLYGGENYCN 107 Title: Perfect score: Sequence:

Scoring table:

830525 segs, 258052604 residues HLUSCM62 Gapor 10.0 . Gapext 0.5 Scarched:

830525

Minimum DB seq length: 0 Maximum DB seg length: 200000000

Total number of hits satisfying chosen parameters:

Post-processing: Minimum Match 100% Maximum Match 100% Listing first 45 summaries

Database

spontancile:
sp\_phage:
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6: sp\_incar:\*
7: sp\_incar:\* SPTREMBL\_23:\* 

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# STRWARTS

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	Query Match Length DB	011	210	310	217	245	106	2:2	2:7	110	217	217	:0E	80.7	::	2:7	1:0
,	Ouery Match	45.5	45.3	42.8	42	38.8	37.4	36.3	€. Se	34.3	34.2	33.6	3 \$ 5 . \$	33.3	33.2	33.2	33.0
	Score	267	266	251	249	228	219.5	213	213	201.5	201	197	195.5	195.5	195	195	193.5
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098ta7 osteoglossu 098tb1 catostomus 098ta9 quathonemus 098tb2 amblopiites	Q8mi74 callithrix Q70615 spalax leuc Q9ty91 equus cabal O6mi73 delbérnis d	(*) ◀	, 0 ** •	20 <del>4</del> 9 7 0	091415 Squalus aca 091161 oncorbynchu 091476 salmo salar 091475 salmo salar 091231 oncorbynchu	091162 oncorhynchu 091290 oncorhynchu P81268 oncorhynchu 091965 oncorhynchu
0981A7 0981B1 0981A9 0981B2	Q8M174 C76615 Q9TV91 Q8M173	09HYES 09R2C3 09JKM4 095KJ5	095205 08AV14 093607	043720 042289 779824 057436 093527	091443 091476 091475 091473	091162 091230 P81268 091965
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191.5 189.5 187.5 185.5	171.5 161 159.5 159.5		149.5 148.5 148.5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		147.5 147.5 147.5 147.5
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#### AL LGNMENTS

	GENAZ: PRELIMINARY: FRI; IIO AA. Q8HXV2:	01-MAR-2003 (TrEMBLrel. 23, Created)		Lrel. 23,	Justila precursor.	INS.	Pongo pygmaeus (Orangutan).	Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pondo.		[1]	SEQUENCE FROM N.A.	Stead J.D.H., Jeffrevs A.J.;	"Haplotype diversity at the insulin region.";	Submitted (JUL-2002) to the EMBL/GenBank/EDBJ databases.	EMBL: AY137503; AAN06937.1;	SEQUENCE 110 AA; 12038 MW; 22D2B32B94F520F8 CRC64;	Query Match 45.5%; Score 267; DB 6; Length 110; Bost foral similarity 60 5%; Drud No 6 60-24;	ative (	56 FVNOHLCGSH;VEAI,YI,VCGERGFFYTPKJ	25 FVNQHLCGSHLVEALYLVCGERGFFYTPKTRREARDLOVGOVELGGGPGAGSLOPLALEG	86RGIVEQCCTSICSLYQLENYCN 107	88 SIQKRGIVEORGISICSINQLENYCN 110	
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ω Ω 84

110 AA.

RESULT 2 0.1X13 12 0.01X13 AC 0.1X13, ET 01-DEC-2001 (TEMBLEEL 19, Created)

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Euteleostomi;
Atelinac: Ateles.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Term placenta;
MEDGINE-98373737; PubKed-9709963;
Boquascwski C.L., Svensson P.A., Jansson T., Clark R.,
Carisson L.M.S., Carisson B.;
Closing of two novel growth hormone transcripts expressed in human placenta.";
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Eukaryota: Metazoa: Chordata: Craniaia: Vertebrata: Euteleostomi;
Mammalia: Butheria: Primates: Catarrhini; Hominidae; Homo.
NCBL_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SECUENCE FROM N.A.

Revol A., Esquivel D., Santiago D., Barrera-Saldara H.;

Revol A., Esquivel D., Santiago D., Barrera-Saldara H.;

Nucleopendent incates.;

Submitted (ARR-2001) to the FMBL/Genbank/DDBJ databases.

Submitted (ARR-2001) to the FMBL/Genbank/DDBJ databases.

InterProl PR001400; Somatotropin.

Pfam: PP00103; hormone: 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 42.4%; Score 249; DB 6; Longth 217; Bost Local Similarity 97.9%; Pred. No. 2c-21; Matches 47; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4; Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FIGURE F COLOGY MARKET SON TO THE TO THE PROSITE; PS00338; SOMATOTROPIN_2; 1. SEQUENCE 217 AA; 24894 MW; 425829FF41EEAAF6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
14CC7F8CD75D91C8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eskaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Primates, Platyrrhini, Cebidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-3AN-1998 (TrEMBLrel. 05, Created)
01-3AN-1998 (TrEMBLrel. 05, ast sequence update)
01-DEC-2001 (TrEMBLrel. 19, last annotation update)
Plucental growth hormone isoform hGH-V3 precursor.
                                                                                                                                                                                                                                                                                                                                        Last sequence update)
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EMBL: AF006661: AAB71829.1; -.
HSSP: P01241: 1A22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Atcles geoffroyi (Black-handed spider monkey)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245 AA.
                                                                                                                                                                                                                                                       217 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38.8%; Score 228;
                                                                           # FLOKKGIVEOCCASVOSLYQLEBYCN 110
                                           36 ----RGIVEGGCTSICSINGLENYCN 107
                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00163; hormone; 1.
PROSITE: PS00266; SOMATOTROPIN_1; 1.
                                                                                                                                                                                                                                                       P.K.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro: IPR001400; Somatotropis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2710: MW;
                                                                                                                                                                                                                                                       PRECEMINARY
                                                                                                                                                                                                                                                                                                      01-MAR-2002 (TrENBLrel.
01-MAR-2002 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
Growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRECEMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SECURIOR SECM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_Tax1D+9509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C14644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Signal.
SiGNAL
                                                                                                                                                                                                                                                       DENMED
                                                                                                                                                                                                                                                                                   OBMNEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              014644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                        CHNMEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.14644
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Tredrea M. J. Buck M.J., Guidaniyogi J., Squire T.L., Andrews M.T.:

"Regulation of PDK4 expression in a libernating mascal.";

"Submitted (JUN-2001) to the EMEL/Geobank/DDB1 databases.

-1- SUBCELLULAR LCCATION: SICRETED (BY SIMILARITY).

-1- SUBCELLULAR LCCATION: SICRETED (BY SIMILARITY).

REMBL: AXO38604; AAR72558.1;

R HSSP: PO1306; LLNF.

R HSSP: PO1306; LLNF.

R FRINTS: PR00495; InsJin; 1.

R PRINTS: PR0077; INSJIN; 1.

R PRINTS: PR0077; INSJIN; 1.

R PROSITE: PS00252; INSJILIN; 1.

R PROSITE: PS00252; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50 LGTGP--RYVNQHLCGSHLVEALYLVCGERGFFYTPKT------------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36; Gaps
                                                                        Spermophilus tridecorlineatus (ihrrteenrihus) mound squirri).
Bukaryota: Metazoa, Chordana: Graniata, Wellebratu; Esteleosturi:
Marmalia: Buthecia, Rodentia: Sciuroquathi; Sciuridae: Sciininee:
Spermophilus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Felis silvestris catus (Cat).
Eukaryota: Metazoa; Chordata; Craniala; Vertebrala; Entelcostomí:
Mammalia; Butheria; Carnivora; Fissipedia; Folidae; Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45.3%; Score 266; DB il: Rength 110; 57.4%; Prod. No. 8.70-24; Live I; Mismatches 3: Indels 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.8%; Score 251; Da 6: Langth 110: 55:8%; Pred. No. 5:36-22: tive 2: Mismatches 2: tage!s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IISSUEPPancreas:
Okamoto S., Morimatsu M.;
Okamoto S., Morimatsu M.;
Cat insulin.":
Submitted (MAY-2000) to the EMBL/GenHauk/JPHB; dutahases.
-1- SUBCELLUINAL LOCATION: SICRETED (BY SIMILARITY).
-1- SIMILARITY: BELONGS TO PHE INSULIN/TGE/RELAXIN FAMILY.
EMBL: AB041535; NAB84119.;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56 FVNQHLCGSHIVBALYLVCGBRGFFYTPKT-..........
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12069 MW: 95FB6817007880A4 CRO64;
01-DEC-2001 (TrBMHLrel, 19, last sequence update)
01-MAR-2003 (TrEMBLrel, 23, Last ancotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0: MAR-2002 (TrEMBLrol. 20, Created)
01-MAR-2002 (TrEMBLrol. 20, Last sequence update)
01-MAR-2003 (TrEMBLrol. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77 PQPLALEMALQKRGIVEQCTSICSLYQLENYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11.0 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro, 1PR064625; Ins/IGF/relax. Pfam: PF00049; Insulin: 1. PRINTS; PR00277; Insulins. SMART; SM00078; ILGF: 1. SMART; SR00065; ILGF: 1. SEQUENCE 110 AA; 12069 RW: 95FB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ocory Match
Best Local Similarity 55.88
Matches 48, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 57.44
Matches 54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECUENCE FROM N.A.
                                                                                                                                                                                                                                                                          SECUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                         TISSUE=Pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Preproinsulin.
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ISSUM=Xidoreanancy placenta; MEDIANS=94708724; Publiks=94708724; PubMed-840877; Medians=94708724; PubMed-8404677; Medians=94708724; PubMed-8404677; Medians=94708724; PubMed-8404677; Medians=94708724; Posterials of four growth formone/choitonic somatomammotropin-related complementary docxyribonucieic acids differentially expressed during prequency in the rhesus monkey placenta."; Padamentary 13:1744-1724[1993].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bukaryota: Metazoa; Chordata: Craniata; Vertebrata; Buteleostomi:
Mammalia: Butheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pantodon buchholtz) (Butterflyfish).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi,
Actinopterygii; Neopterygii: Teleostei; Osteoglossomorpha,
Ostcoglossiformes; Pantodontidae; Pantodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36.3%; Score 213; DB 6; Length 217; 78.7%; Pred. No. 3.8e-17; Live 9; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                  3 PTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 212;
                                                                                                                                                                                                                                                                                         3 PTIPLISRIFONAMI.RAHRLHQLAFDIYQEFEEAYIPKEQKYSFLQNP
                                                                                                                                                                                                                                             i: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-21203577: Pubmed-11306171;
Al-Mahrouki A.A., Irwin E.M., Graham E.C., Youson J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24942 MW; FF5AA8915131F2BC CRC64;
                                                                                                                                                          SEQUENCE 212 AA; 24525 MW; 27BC91106256E6F5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17, Created)
C1-JUN-2001 (TrEMBLrel. 17, Last sequence update)
HAR-2003 (TrEMBLrel. 23, Last annotation update)
Preprolishlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. NOV-1996 (Tremshrel, 61, Created)
01-NOV-1996 (TrEMshrel, 01, Last sequence update)
01-MAR-2003 (TrEMshrel, 23, Last annotation update)
                                                                                                                                                                                                 36.3%; Score 213; DB 6;
78.7%; Pred. No. 3.7e-17;
tive 9; Mismatches 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 217 AA
                                                                  InterPro, IPR001405; Somatotropin, Pfam: PF00103; hormone; 1. PROSITE; PS00338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRI;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro: IPR001400; Somatotropin.
Pfam; PF00103; hormone; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cherionic somatomammetropin-1.
Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINIS; PRO0836; SOMATOTROPIN.
PROSITE; PSC0338; SOMATOTROPIN.
                       EMBL: L16553; AAA18840.1: -. HSSP: P01241; TAXI.
                                                                                                                                                                                                 36.33
Best Local Similarity 78.73
Matches 37: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 78.7
Matches 37, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL: 016552; AAA18
HSSP; P01241; LAXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SECUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxlD=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECUENCE
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007367
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ID Q9
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                                              Saps
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Endocrinology 133:1744-1752(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
Ranidae; Pana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota: Metazoa: Chordata: Craniata; Vertebrata: Enteleostomi:
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                                                                                                          27 PPTLPLSELEDNAM,RAKELYÇLAYDIYQEFBAYILKEÇKYSELÖNP 74
                                                                                   2 FPTIPLSRLFDNAMLRAHRLHQLAHDTYQRFEEAYIPKEGKYSFLONP
Pred, No. 7.3e-13;
Terratoria 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia: Eutheria: Primates: Catarrhini: Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; 30:1 ; 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TTEMBLICE). 01, Created)
01-NOV-1996 (ITEMBLICE). 01, Last sequence update)
01-MAR-2003 (TTEMBLICE). 23, Last annotation update)
Somatotropin. 2 precursor (Grewth hormone 2) (Fladment).
Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12183 MW: 3A870EEC70217F32 GRC64;
                                                                                                                                                                                                                                                                                                                                                                        Rana piptons (Northern Leopard frog).
Eukaryola: Metazoa: Chordata; Craniata: Vertabrata:
Amphibia: Batrachia: Anura: Neobatrachia; Rasoideu:
                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212 AA
                                         2; Mismatches
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                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                       Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84 KPGIVEQCCHUTCSLYDLENYCN 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-20362507: PubMed-10918274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=94008724; PubMed-8434617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE, PS00262; INSULIN; 1. SEQUENCE 106 AA; 12183 MW;
                92.78;
                                                                                                                                                                                                                                                                                    01-OCT-2060 (TrEMBLrel. 15, 01-OCT-2060 (TrEMBLrel. 15, 01-MAR-2063 (TrEMBLrel. 23,
                                         44: Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41; Conservative
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                                                                                                                                                                                                                                           PRELIMINARY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cercopithecinae; Macaca.
NCBI_TaxID=9544;
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                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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Q07358;
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MEDLINE-39307277; PubMcd-2744760;
Clen E.Y., Ilao Y.C., Smith D.H., Barrera-Saldana H.A., Gellnas R.E.,
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Eukaryota: Metazoa: chordata: Craniata: Vertebrata: Euteleostomi:
Actimopterygii: Neopterygii: Teleostei: Ostariophysi: Cypriniformes;
Cyprinidae: Danio.
                                                                                                                                                                                                                                                                                                                                                                                   The human growth hormone locus: nucleotide sequence, biology, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDCINE=91102558: PubMod-1980158; Venerak-Ones C.L., Phillips J.A. III.; Whencak-Ones C.L., Phillips J.A. III.; Whill storts for growth horrone gene deletions in homologous regions outside of Alu repeats.
                                                                                   Enkaryota, Metazoa, Chordata, Cranhata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Argenton F., Zecchin E., Bortolussi M.;
"Darly appearance of pancreatic hormone-expressing cells in the zebrafish embryo."
"Estalish embryo."
"ESTALY-21(1999).
"ESUBCELLULAR IJCATION: SECRETED (BY SIMILARITY).
"I SUBCELLULAR IJCATION: TO THE INSULIN/IGF/RELAXIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ć
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 TIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQN 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24994 MW; 39FAACDDB6B2E951 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-2001 (TrEMBLrel. 16, Greated)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOTAL 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (JUL-2002) to the EMBL,
EMBL; 903071; AAA52553.1; -
EMBL; BC022044; AAH32944.1; -
EMBL; BC035665; AAH35965.1;
HSSP; P01241; 1A22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Science 250:1745-1748(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 80.03
les 36, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Senomics 4:479-497(1989).
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                      2).
Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217 AA;
                                                                                                                                                                                                                                       SEQUENCE PROM N.A.
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                                                                                                                                                               NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                           Chen E.Y., Ida
Seeburg P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Strausberg R
                                                                                                                                                                                                                                                                                                                                                                                                                  evolution.";
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Q90085.
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Q9DDES
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26 SQHLGGSHLVDALXMVCGEKGEFYQPYTXROVDPLEAFLISPKSAQENEADEYFYKRGGRUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 NOHLCGSHIMEALYLVCGDRGFFYTPKT----
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01-NOV-1996 (TrEMBLRel. 31, Last Sequence update)
01-WAR-2003 (TrEMBLRel. 23, Last annotation update)
Choxionic somatomanmotropin CS-2 (Chorionic sematomammotropin horeche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Side
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"Closing of tour growth hormone/Chint'conic some.common.related
"Closing of tour growth hormone/Chint' conic some.complementary decayrathobucleic acids differentially expressed duting
pregrammy in the rhosus monkey placental;
Endocarino.comy 133:1744-1752(1993).
EMBE: L16554: AAA:1841.1.
ESSP: P01241: IAXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Eutoleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Cercopilhocidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.3%; Score 201.5; DB is: Langth 116;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 PTIPLSRLFDNAMLRAHRLEQLAFDTYGSFERAY1PKEGZYYSFIGNT 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34.2%; Score 261; DS 6; Length 217; 74.5%; Pred, No. 1e-15;
"Molecular cloning of preproinsulin cours from several solutions of a reprinted.";

Mol. Cell. Endoction: 124:67-58(200).

-1. SURCELLUAR LACATION: SUCRETED (BY SIMILARITY).

EMBL. FELLOWS TO "HE INSULIN/ISF/EDLAXIN FAMILY.

EMBL. #F19588: AMA22712.1;

HSSP, P01308: HBS.
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(1-NOV-1996 (TrEMBLrel. 01, Last sequence updat.e)
(1-NAR-2003 (TrEMBLrel. 23, Last annotation update)
Chorizonic somatcomarmotropin.3.
Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
ک
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 4e-16;
8: Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          217 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86 KVKRGIVEQCCHHPCNIFDLQNYCN 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---RGIVEQCCTSICSLYOLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterProj TPR001400; Schautropin, Pfam; PF00103; hormone; PR0017E; PS00266; SCMATOTRO; I. 1. PROSTTE; PS00338; SCMATOTRO; I. 2: 1. SEQUENCE 217 AA: 24874 MK; PLEB63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : : : :
                                                                                                                                                                                                                                                  | March | Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE Midpregnancy placents;
MEDLINE-94008724; PubMed+84(4617;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 43.5
Matches 37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cercopithecinae, Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID-9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        207369;
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Q07369
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Q14407
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Mammalia, Butheria, Primates, Platyrrhini, Cebidae, Atelinae, Ateles.
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                   Eukaryota: Metazoa, Chordata, Crāniata, Vertebrata, Eureleostomi;
Actinopterygii, Neopterygii; Teleostei; Osteoglossomorpha;
Gsteoglossiformos: Notopteridae; Chitala,
                                                                                                                                                                                                                                                                                                                                                                                                              35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ::
©
                                                                                                                                                     SECUENCE FROM N.A. Requivel D., Santiago D., Rarrera-Saldana H.; Reviola A., Esquivel D., Santiago D., Rarrera-Saldana H.; Independent dineages."; Authopoidean illneages."; Submitteed (APR-2001) to the EMBL/GenBank/DDBJ databases. EMBL: 3734235; AAL722871; InterPro: IPR001406; Somatctropin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNP 49
                                                                                                                                                                                                                                                                                                                                                                                  Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33.2%; Score 195; DB 6; Length 217; 77.1%; Pred, No. 5.2e-15; Fred 5; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58 NQHLCGSHLVKALYLVCGERGFFYTPK---------------
                                                                                                                                                                                                                                                                                                                                                                                                            indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pram: PF00103; hormone: 1.
PRINTS; PR00836: SOMATOTROPIN.
PROSITE: PS00266: SOMATOTROPIN.1: 1.
PROSITE: PS00338: SOMATOTROPIN.2: 1.
SEQUENCE 217 AA: 25293 MW; 741745A1B75C053E CRC64:
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE 111 AA; 12483 MW; 2470A4431376329F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
Last sequence update)
Last annotation update)
              61-JUN-2001 (TIEMBLEEL 17, Created)
61-JUN-2001 (TIEMBLEEL 17, Last sequence update)
61-MAR-2003 (TIEMBLEEL 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                               33.2%; Score 195: DB 13:
44.2%; Pred, No. 2.4e-15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ateles geoffroyi (Black-handed spider monkey).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217 AA
                                                                                                                                                                                                                                                                                                                                                                                                            3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bost Local Similarity 77.1%, Fred. No. 5.2e
Matches 37, Conservative 5, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85 --- TRGIVEQCCTSICSLYQLENYCN 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               86 VKMKRGIVEQCCHRPCNIFDGNQYCN 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                      Preproinsulin (Fragment).
Chitala chitala (clown knifefish).
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20,
22,
                                                                                                                                                                                                                                                                                                                                                                                                            33; Conservative
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01-MAR-2002 (TYEMBLIEL)
01-00T-2002 (TYEMBLYEL)
                                                                                                                                                                                                                                                                                                                                                                               Opery Match
Sest Local Similarity
                                                                                                                               NCBI_TaxID=112163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia: Euther
NCBI_TaxID=9509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Growth hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Owery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHANGE
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Ostaricphysi: Cyprin'fornes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brattacharya S., Roy S.S., Lasgupta S., Ravikomar L., Eukhorje, E., Bandyopadhyaya I., Wakabayasi K.;
Bandyopadhyaya I., Wakabayasi K.;
Bandyopadhyaya I., Wakabayasi K.;
Bandyopadhyaya I., Cheling insulin.";
Submitted (APR-2001) to the EMRI/GenRank/PPRJ databases.
-!- SUBCELLULAR LOCATION: SPCRETED (BY SIMILARIIY).
-!- SUBCELLARITY: BELONGS TO THE INSULIN/IGE/RELAXIN FAMILY.
EMRI; AF373021; AAK51558.:: --
HSSP: P01308; ILNP.
                                                                                                                                                                                               33.3%; Score 195.5; DB 13; Length 108; 45.1%; Pred, No. 2e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33.3%; Score 195.5; DB 13: Length 108:
45.1%; Pred. No. 2e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59 QHLGGSHLVEALYLVCGERGFFYTPX------------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7; Indels
                                                                                                                                                                                                                            Indels
                                                                                                                           POTENTIAL.
INSULIN B CHAIN.
INSULIN A CHAIN.
3195243E77AD6D25 CRC64:
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                                                                                                                                                                                                                                                                                                                                                                                                                                   01-5EC-2031 (TreMBirel, 19, Greated)
01-5EC-2001 (TrEMBirel, 19, Last sequence update)
01-MAR-2003 (TrEMBirel, 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1:1 AA.
                                                                                                                                                                                                                                                                                                                                                                                                            106 AA.
                                                                                                                                                                                                                            5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Catla catla (catla).
Bukaryota: Mctazoa; Chordata: Craniata;
Cyprinidae; Catla.
Cyprinidae; Catla.
NCBI_TaxID-72446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HILL II : 1:::1:111
RGIVEQCCHEPCSIPELONYON 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         86 RGIVECCTSICSLYCLENYCW 107
                                                                                                                                                                                                                                                                                                                                    87 RGIVEGGGHKPCSIFELQNYCN 108
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...
             HSSP: P01308; 1LPH:
ZFIN; ZCB-GENE-986526-110; ins.
IntorPro: IPR00485; ins/IGF/relax.
Pfrem: PF00049; Insulin; 1.
PRIWIS: PR00277; INSULINB:
SMART; SM10078; ITGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                            PRT
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Pfam; PF00049; Insulin; 1.
EMBL; AJ237750; CAC20109.1; -.
                                                                                                                                                                      11904 MW:
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SEQUENCE 108 AA; :1881 MW;
                                                                                   SMART; SMC0078; TIGF; 1.
PROSITE; PS00262; INSULIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.18;
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Best Local Similarity 45.19
Matches 37; Conservative
                                                                                                                                                                                                                            Conservative
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24
86
108 AA;
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hes 37; Conserv
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SIGNAL
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Search completed: September 16, 2063, 12:40:00 Job time: 27.8132 secs

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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compuges Ltd.

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Raman growth horro
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hGH-min:-proinsuli
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SIDSI/gcaddia/geneseq/acceseqp.cci. | AAI/98.DAI.* |
| SIDSI/gcaddia/geneseqp.cci. | AAI/98.DAI.* |
| AAI/98.DAI.* | AAI/98.DAI.* |
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                                                                                                                                                                                                                                                                                                                                                                                  1107863 segs, 158726573 residues
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Maximum Match 100%
Listing first 45 summaries
protein - protein search, using sw model
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AAP91299
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Seguence:
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	Fusion protein of		Human growth hormo	growth	of of B-	rowth		beta-ner	สม	Natural human 22kD	Human growth hormo	Human growth hormo	growth	_		Human growth hormo	Human growth hormo		Human growth hormo	Human growth hormo	growth	Human growth hormo	Human growth horme	-	-				Human growth hormo	Human growth hormo		Human growth hormo				
	AAR03255	ABG31862	BG9486	^	AAR05313	ABG94975	ABG54976	AAP61033	AAC20110	AAY04396	$\sim$	748	8	S	ABC94864	ABG94907	ABG94908	AFG94909	ABG94910	ABG94911	ABG94912	ABG94913	ABG94914	ABG94915	AB394916	BG9491	_	3491	32			ABG94923	AEC94924	9492	: 92	ALIGNMENTS
7.7		23	23	53	Н	m	~		α)	О	21	22	22	23	23	23	23	23	23	23	23	23	23	23	23	53	23	23	23	23	23	23	23	23	23	
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465	465	464	463	463	462	462	462	462	_10 **	195	195	795	461	461	461	461	461	46.	46.	. 9	<del>.</del>	462	461	461	46.1	461	461	461	461	461	46.1	461	461	461	E 3 **	
ი:	r d red	12	(r:	•4	u:	φ		:B  -:∃	5.7	20	21	22	23	4.2	ις. (Ζ	26	2.7	2 R	29	30	. ī.	32	3.3	34	3.5	36	£.	38	S.	O.		 €3	ा च	77	40	

New chimeric proteins containing human growth hormone fragment, used insulin; precursor; growth hormone; chaperone; intramolecular; folding; conformation; chimeric protein; cleavable; recombinant; LTD (TONG-) TONGHUA GANTECH BIOTECHNOLOGY AAY42861 standard; protein; 150 AA 98WO-CN00052 98W0-CN00052 Chimeric protein, SEQ ID 7 (first entry) WF:: 1999-610839/52. production; yield Homo sapiens W09950302-A1 31-KAR-1998; 31-KAR-1998; 19-JAN-2000 07-00T-1999 Synthetic AAY42861; Gan 2; AA14286 \$\text{\$\

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This sequence represents a chimeric protein, which contains on Neterminal tragment of human growth bormone (hos) of the sequence also in AAV42856, a cleavable peptide luser (AAV42857), and a histories insults precursor comprising insulin, a and 8 chains (AAV42859). The LOB portion of the chimeric protein acts as an intramolecular chaperone (1MT) is the insulin precursor enabling to fold correctly free cleavable peptide linker has a C-terminal Arg reside which enables the hos protein of the chimeric protein to be removed after rolation has taken place. Production of recombinant buman insulin via an healthy profine chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     interactions among the fusion proteins, thus allowing folding of the fused insuling precursor at commercially useful lith concentrations. The procedural steps of cyanogen broaded cleavage, oxidative sulphitolysis and related purification steps can thus be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobic absorbent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 TPSNREETQQKSNLELLRTSLLLLQSWLEPVQLGTGPRFVNGHLCGSHLVEAAYLVCGER 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein can provide human institu with correctly linked cysteting in desswith fewer processary procedural steps, and hence resulting in a higher yield of human institu. The INC sequences not only protect insulin sequences from intracelliar destractions by a microornanism heat. But also protect the folding of the fased insulin procursor, fact that solubility of the fusion protein and decrease the interrolection.
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Pred. No. 1e-42;
; Mismatches 0;
particularly for the production of human inspira
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                                                                    Claim 14; Puge 30-51; 45pp; English.
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100.0%
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les 150: Conserv
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AAY 4286C

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This sequence represents a chimeric protein, nGH-mini-proinsuin.

This chimeric protein contains an N-terminal fragment of human growth horzone (hGH) of the sequence given in AAV2855, a cleavable peptide linker (AAV2857), and a human insulin precursor comprising insulin as an intranolecular chapterone (IMC) for the insulin precursor, as an intranolecular chapterone (IMC) for the insulin precursor, and intranolecular chapterone (IMC) for the insulin precursor, and intranolecular chapterone (IMC) for the insulin precursor, and high protein of the cheavable poptide linker has a chimanial and residue which enables the hGH portion of the cheavable poptide linker by chimaric protein to be removed after folding dostone of the chimaric protein can provide human insulin with correctly linked cystoine bridges with the provide human insulin with correctly linked cystoine bridges with the fusion form of the fuscalinar degradation by a microorganism host, but also promote the fusion proteins and decrease the intermolecular interactions among the fusion proteins, thus allowing folding of the fused insulin precursor at commercially useful high concentrations. The procedural steps of cyanorgen bromide classics allowing dolding of the fused insulin precursor at commercially useful high concentrations. The procedural steps of purification steps can thus be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobic absorbent resins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQLGTGPRFVNQHLCGSHLVEALYLVCGER 120
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                                                     chimeric proteins containing human growth hormone fragment, used the large for the production of human insulin .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Growth hormone; chaperone; intramolecular; insulin; precursor;
folding; conformation; chimeric protein; cleavable; recombinant;
production; yield;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 107;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69.7%; Score 555.5; DB 20;
71.3%; Pred. No. 8e-28;
Live 0; Mismatches 0; 1
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                                                                                                               Claim 13; Page 30; 46pp: English.
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Hest Local Similarity 71.3°
              WPI; 1999-610839/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107 AA;
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This sequence represents an N-terminal fragment of human growth hormone (high) which is a component of a chimeric protein (AAV1286) which also contains a human insulin precursor (AAV12869). The EGH portion of the chimeric protein acts as an intramolecular chapteone (IMC) for the insulin precursor, enabling it to fold correctly. A cleavable peptide linker with a C-terminal Art regidue (AAV12867) anables the build portion of the chimoric protein to be removed affectly influence take primers. Production of recembinant bursa insulin via an host-profits it of merric protein can provide human insulin with currectly linked eyseline bridges with fewer necessary procedural steps, and lenne resulting is a higher yield of human insulin. The EMC sequences not only protect insuling a sequence from intracellular degradation by a microransian best. But, also prorote the folding of the lased insulin precursor, localizate the containing containing containing the intermolecular.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; anti anglogenic; prolactic; pracenta; lactogen; hPL; anologenosis; qrowth hormone, hGn; hGH-V; capillary endothelia; cell proliteration; placental vascularisation; pregnancy; treatment; anglodente disease; tumour; inhibitor; malignan; anglodibroma arteriovencus malformation; arthritis; atherosclerotic plaques; corneal graft neovascularisation; arthritis; atherosclerotic plaques; corneal graft neovascularisation; grandiation; glaucoma; ocular; uveils; flacture; Gsler-Weber syndrome; psorlasis; flarophasia; sclaroderma; Kaposi's sarcoma; vascular adhesionulcer; leukaemia; reproductive disorder; contraceptive agent;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | HELLOTIC | THE CONTROL OF THE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            interactions among the fusion proteins. thus allowing residue of the fused institut precursor at commercially useful high consections. The procedural steps of eypnopen tromide cleavage, oxidative supplicables and related puritication steps can this be eliminated, along with the use of high concentrations of mercaptan or the use of hydrophobin.
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                                                                                                                                                                                                                                New chimeric proteins containing human growth hormone fragment, used particularly for the production of human insulin
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Pred. No. 1.56-12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismarches
   TONGHUA GANTECH BIGTECHNOLOGY LID.
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100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                        Claim 5; Paqe 28; 46pp; English.
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                                                                                                                                                      WPI; 1999-510839/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    therapy:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W09851323-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW92265;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sednence
(-SNCL)
                                                                                 Gan 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW92265
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mondaturing vascularization of a patient, a practicus, in particusary, and perfect of the perfec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Irom 10 to 150 consequitive aminous and support progress werest from 10 to 150 consequitive aminous selected from the N-terminal and burners placental lactogem (hPL), human growth hormone (hGH), growth hormone variant (hGH-V), or human prolactin. Such peptides (i) inhibit capillary endothelial cell proliteration and organisation (ii) inhibit angiogenesis in chick chorioallantote membrane and (iii) binds to at least one specific receptor which does not bind an intact full length hGH, hPL, prolactin or hGH-V. The invention also describes a method for diagnosing a probable abnormality of placental vascularisation during programmer. The peptides can be used for treating an angiogenic disease in a subject, for inhibiting tumour formation or growth in a patient or for modulating vascularisation of a patient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MFPTIPLSRLFDNAMIRAHRLHQIAFDTYQEFEEAYIPKEOKYSFLQNPQTSLSFSESIP 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention describes novel human anti-angiogenic poptides derived
                                                                                                                                                                                                                                                                                                                                                                                              New anti-anglogenic peptides - comprise N-terminal fragments of \operatorname{Numan} placental lactogen, human growth hormone, growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .:
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59.0%; Score 470; DB 20; Length 134; 106.0%; Pred; No. 2e-22; Live C; Mismatches 0; Indels (
                                                                                                                                                                                                                                              Weiner RI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 TPSNKEETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human growth hormone mutant hPRL (111-129).
                                                                                                                                                                                                                                           Taylor R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4: Page 49-50; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABG94861 standard; Protein; 191 AA
                                                              98WO-US09691.
                                                                                                                       97US-0046394.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         variant or human prolactin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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                                                                                                                                                                                                                                           Struman I,
                                                                                                                                                                                  (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                                                                                                                                   WPI: 1999-045192/04.
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ses 92; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134 AA;
                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAX01707
                                                              12-MAY-1998;
                                                                                                                                                                                                                                           Martial JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-DEC-2002
19-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABG94861;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG9486
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61 PSWREETUGGKSNLEBLER SELLLZQSWLEPVQF-LRSVFANSLVYGASDSNVVDILEGLKR 119
62 PSNREETQOKSNLELLRISLLLJQSWLEPVÇLGTGPRFVNQHLGGS-------H 108
                                                                                                                                                                                                                                                                                                                                                                                        (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1989-209284/29.
N-PSDB; AAN90269.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         192 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and high yield.
                                                                                                                                                                                                                                                                                                                                                                                     25-MAR-2003
06-FBB-1996
01-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP31144981-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-DEC-1387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-DEC-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07 - JUN - 1989
                                                                                                                                                                                                                                                                                                                                  AAP90129:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW92264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KESSULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                              \hat{\Xi}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The inversion relates to identifying an inknown active domain the parent polypeptide e.g. human growth hormone (hGH) which has been cloned and has a pre-identified biological active domain interacts with a target, when the parent colypeptide is in its native foided form and the interaction is responsible for the biological activity comprising: (a) comparing the amino acid sequence or polypeptide structure. In the region of known amino acid sequence of hGH with the amino acid sequence of hGH with the amino acid sequence of an analoque of polypeptide (e.g. prolateth, placettal lactogen or polypeptide for the optimates within about 2.5.5 angstrows of hGH alpha-carbon coordinates within about 2.5.5 angstrows of hGH alpha-carbon coordinates within about 2.5.5 angstrows of hGH alpha-carbon coordinates within about 2.5.5 angstrows of hGH alpha-carbon with hGH alpha-carbon with hGH analoque with the target is different from target interaction with hGH analoque with the target to defermine interaction with horse to polypeptide segment from the coordinates with the target to determine interaction with horse to polypeptide and analoque with the target to determine interaction (d) refeating steps to polypeptide with the target to determine interaction (d) refeating steps (e) and (c) with a segment substituted polypeptides as an indication of the first and second cashacous polypeptide segment, and second cashacous polypeptide segment, and second cashacous polypeptide segment, and second cashacous polypeptide segment and second cashacous polypeptides and second cashacous polypeptides as an indication of the first and second cashacous in the difference active domain in the difference and polypeptides as an indication of the propertion of the relationship between settences from an india analogue (properties experience) and expense in a polypeptide expense in a polyp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention relates to identifying an unknown active domain in a region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPTIPLSRLFONAMI RAHFOHQUAFOTYQBFERAY (PREGXYSFLONFOTSLSFSESTF) = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       identifying active domains within cloned polypeptides of known amino acid sequence by substituting analog segments into the parent polypeptide is useful to deformine the relationship between structure and function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels 18; days
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Note: The present sequence is not shown in the specification not was created by the indexer using the mature how sequence and information
                        active domain, EIH;
                     Growth hormone, placectal Lactober, prelacting active demain, ACM structure-function relationship, segment substituture polypepties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.0%; Score 470; DB 23; Length 191:
69.2%; Pred. No. 2.6e 22;
Live 8; Mismatches 19; Indols 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lactoges or percire growth horsens;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page ~; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contained in the specification.
                                                                                                                                                                                                                                                                                                         95US-0483039
                                                                                                                                                                                                                                                                                                                                                          89US-0428066
                                                                                                                                                                                                                                                                                                                                                                                920S-0875204
920S-0960227
                                                                                                                                                                                                                                                                                                                                                                                                                                   94US-0190723
88US-0264611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cunningham BC;
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nes 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-696875/75.
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                                                                      mutant: mutein
                                                                                                                                                                                                                                                                                                                                                                                  27-APR-1992;
13-OCT-1992;
02-FEB-1994;
28-OCT-1988;
                                                                                                                         Homo sapiens
Synthetic.
                                                                                                                                                                                                  US6428954-B1
                                                                                                                                                                                                                                                                                                         06-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                          26-0CT-1983;
                                                                                                                                                                                                                                                      06-AUG-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wells JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              placental
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Best Local S
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£1 IPSNREETOOKSNLELLRISLLLIQSWLEPVQLGTGPRFVNOHLCGS------HLV 110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MFPIIPLSRIFONAMIRAHRIHQLAFDIYQEFEEAYIPKEGKYSFUONPQISLSFSESIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention consists of a vector contg. a fusion protein which is formed by ligating, downstream of a promoter, hGH or a deriv. (prof. formed by subtstn. of Met.14 with Leu) and a foreign protein. Stability of the vector in the nost is greatly increased so the protein yield is higher.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Recombinant vector contq. fusion protein - consisting of human growth hormone or deriv. ligated to foreign protein, for stability
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inde, s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human growth hormone, tusion protein; recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.5%; Score 466; DB 10;
70.5%; Pred. No. 4.6e-22;
cive 7; Mismatches 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Updated on 25-MAR-2003 to correct PA field.)
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109 LVEALYLVCGERGPPYTPKTRGIVEQ 134
                                                    120 LIEGLMLILSDG...-SPRIGGIFKQ 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1: EALYLVCG--ERGFFYTPKTRGIVEQ 134
                                                                                                                                                                                                  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure: Fig 1: 19pp: Japanese.
                                                                                                                                                                                               AAP90129 standard; protein; 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87JP-0304937.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (WAKT ) WAKUNAGA SEIYAKU KK
                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 70.5
mes 103; Conservative
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us-09-423-100-7.rag

192 AA;

Sequence

Human, anti-angiogenic; prolactin; placental lactogen; hPL; angrogenesis; growth horone; hRH; hRH\*V; capillary endotheisal cell proliferation; placental vascularisation; pregnancy; treatment; angiogenic disease; tumour; inhibitor; maliquan; anglofibroma; arteriovenous malicomation; arthritis; atheroscierotic plaques; corneal grate newscalarisation; wound healing; proliferative retinopathy; macular dependencial proliferative retinopathy; macular dependencial on trachema granulation; glaucoma; ocular; uveitls; fractare; Esler-Weier syndrome; ulcer; leckaemia; reproductive disorder; contraneptive agent; adhesion; ulcer; leckaemia; reproductive disorder; contraneptive agent; gene therapy; pre-echampsia; intranerine crowth retardation; New anti-anglogenic peptides - comprise N-terminal framents of human placental lactodes, human growth hormone, growth hormonevariant or human prolactic Human anti-anglogenic peptide hos Met-1Phe191. Woiner FI: Taylor R. AAW92264 standard; Protein; 192 AA. Example 3: Page 49: 87pp; English. 16960SH-0M26 97US-0046394 (first entry) Struman I, (REGC ) CNIV CALIFORNIA placental dysfunction. WPI; 1999-645192/04. N-PSDB; AAX01706 HOMO Sapiens W09851323-A1 12-MAY-1998; 3-MAY-1997; 98-JUN-1999 Martial JA, 

This invention describes nevel human anti-signatoric peptides nectived from the U to 150 conscentive unito acids selected from the N-terminal and from 10 to 150 conscentive unito acids selected from the N-terminal and to for human placental lactogen (hi), human around the N-terminal and to for human placental lactogen (hi), human around the N-terminal and to form the peptides (i) inhibit capitlary endothelial celiproliferation and organisation (i) inhibit and operation of the N-terminal and the new form the favoration as describes a method to high projection or nGH-Y. The invention also describes a method to high and appropriate abnormality of placental vascularisation during pregnatory. The peptides can be used for treating as angiogenic disease in a subject, for inhibiting tumour formation or stown in particular, the peptides can be used for preventing or treating as angiogenic disease peptides can be used for preventing or treating as an inparticular, the peptides can be used for preventing or treating as an inparticular, the peptides can be used for preventing or treating as a reperior of a grid or and of a particular and a sterior of a mediciproma, arteriorers mailton artifitie such as reperior of a mediciproma, arteriorers mailton artifitie such as reperior such as hypertrophic scars or keloid scars, neovascular alauceas, contact tumour, uveitis, non-union fractures, Osler-Weber syndrome, psoriasis, pyogenic glaucoma, retrolental (ibroplasia, scheroderma, solid tymours, pyogenic glaucoma, retrolental (ibroplasia, scheroic varicose micers, leukaemia, and reproductive disorders such as folliandar and inteal cysis and choriocarchoma. They can also be used as contraceptive acents, DNA encoding the peptides can be used in gene therapy. The measurement of abnormal levels of N-termical fragments of hGH-V, prolactin or hBC can be used in assays for impairment of vascular development ussociated with pre-celumpsia, intracterine growth retardation, and placental arthritis, atherosclerotic planues, correal graft necessorialisation. decayed wound nealing, proliferative retinopathy such as diametic retinopathy, macular degeneration, granulations such as those correring in hacmophilic joints, inappropriate vascularisation in wound realing dysfunction

0 inuman growth hormone segment, used at the N-terminal of a fusion protein, which contains a thrombin recognition site, and human beta nerve growth factor (beta-NGF) at the C-terminal. Beta-NGF can be used to control geriatric dementia and other nervous disorders, and can be released from the folsion protein by incubation with thrombin (see AAN90577-8, AAP91034, AAP91299). 61 IPSNREETQQKSNLELLRISELLIQSWLEPVQF-LRSVFANSLVYGASDSWYDLLKDLE 119 61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQLGTGPRFVNQHLCGS------HLV 110 1 MPPIPLSRIFDNAMLKAHRLHQUAFDTYQFFEEAYIPKEOKYSFLONPQTSLCFSESIP 60 1 MFPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEOKYSFLQNPQTSLSFSESIP 60 1 MEPTIPLSHIFDNAMIRAHRIHQIAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESTP 60 Gaps w human nerve growth factor gene encoding lusion protein having cleavage site for thrombin, useful for treating geriattic 16; 0) Length 192; Length 140; geriatric dementia; nervous disorders; human nerve factor. Indels Indels 5C; 58.3%; Score 465; DB 10; 98.9%; Pred. No. 4.2e-22; Score 466; DB 20; Pred. No. 4.6e-22; 7; Mismatches 20; thrombin; 61 TPSNREETQQKSNLELLRISLLLIQSWLEPVQ 92 0; Mismatches SGIQTLMSRLEDG---SPRIGGIFKQ 142 Human growth hormone; jusion protein; EALYLVCG - - ERGFFYTPKTRG:VEQ Disclosure: page 21; 38pp; English. AAP9104: standard; pretein; 340 AA Human growth hormone segment. 58.5%; 70.5%; 89EP-6102795. 88JP-0035042. (first entry). il Similarity 70.5 103; Conservative 91; Conservative Homo sapiens (human). WPI; 1989-243092/34 Similarity 140 AA; dementia, etc. HOSOL ( PACE) 17-FEB-1989; 19-FEB-1968; 14-DEC-1989 EP329175-A. 23-AUG-1989 htsuka E: Seguence AAP91041; ... Query Match Best Local 3 Query Match Best Local Matches Matches SESULT 8 AAP91041 3 q Š à Š

AAP91299 RESULT

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1 MEPTIFLSRLFDNAMLRAHKLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIP 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      can be produced as this fusion protein. It is purified by contacting a gel having a cation exchange gp. with the fusion protein, in the presence of urea. The purified protein is useful in a medicament that treating disorders of the nervous system, eq dementia. Updated on 25-WAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A recombinant human nerve growth factor beta subunit-contg. protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B-cell stimulatory factor-2, interleukin-6, B-ceil difforentiation,
Enterleckin-5; fusion protein.
                                                         Himan growth hormose/human nerve growth factor bota fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 465; DB 12;
Pred. No. 6.8e-22;
                                                                                                               hOH; hNGF; nervous system diseases; dementia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92
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98.98;
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  25-JUN-1991 (first cotry)
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Best Local Similarity 98.9
Matches 91; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                             (TOYL) TUSOR CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fision protein of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDR; AAQ11578
                                                                                                                                                                                                                                                                                                                                                                                          77 AUG-1989;
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                                                                                                                                                                                                                                                                                                                                   37 - AUG - 1989;
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                                                                                                                                                                                                                                                                             22 - MAR - 1991.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New human nerve growth factor gene encoding fusion protein - having cleavage site for thrombin, useful for treating geriatric
                                                                                                                                                                                                                                                                                                       Human nerve growth factor and human growth normone fusion prefett.
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Pred. No. 6.8e-22;
0; Mismatches 1: Indels
                                                                                                                                                                                                                                                                                                                                                          Human nerve growth factor; Bugion protein: theraform;
geriatric dementia; nervous disorders; human growth hormone
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61 TPSNPERTQQKSNLELLA.SLLLIGSWLEPVQ 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
1.140
141.143
144.261
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98.9%;
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                                                                                                                                                                                                                                                      (first entry)
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Matches 91: Conserv
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Reqion
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Human growth hormone mutant hPD (199-112)
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       Claim 10; Page -; 74pp; English.
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920S-0875204.
920S-0960227.
940S-0190723.
880S-0264611.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.2 (see ABG31857).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      191 AA;
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13-OCT-1992;
02-FEB-1994;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  i T
                                                                                                                                                                                                                                                                                                                                                                                              The protein is produced by fusing DNA encoding 3DF (II.-) with DNA encoding BSF-2 (IL-5)and ligating the product into an expression vector See also AAR05311 and AAR05313.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human, growth hormone: hGH; Turner's syndrome; schoudroplasta; growth hormone deficiency in adults; GHDA; checkie, renal insufficiency renal failure in children; acquired incume deficiency syndrome; AIDS; AIDS wasting; cachexia; mutsat, pureir;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New conjugates exhibiting growth hormone activity, useful for treating a disease or for manufacturing a medicament for treating a disease, e.g. Turner's syndrome, growth hormone deficiency, actiondropiasia, ALDS wasting or cachexia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MEPTIPLSRLFONAMLRAFRLHQLAPOTYQEFEEAZIPKEGKYSFLQNPQTSLSFSRSIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6858
                                                                                                                                                                            Prepal of human B-cell differentiation factor - from specified BNA sequence segment, by recombinant BNA technique, gives protein of specified amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.3%; Score 455; DS 11; Length 310; 98.9%; Pred. No. 7.7e-22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 IPSNREETOOKSNLEILRISLLIQSWLEPV0 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mature human growth hormone (hGH), mutant #4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0: Mismatches
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                                                                                                                                                                                                                                                                                                                           Claim 31; Page 9; 17pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABG31862 standard; Protein: 191
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11-JAN-2001; 2001US-261411P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JAN-2002; 2002WO-DK00017.
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                                                                       1990-062207/09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 91; Conserv
(TOYU ) TOSOH CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 310 AA
                                                                                                            N-PSDB; AA002028
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(Gii) activity and comprise at least one non-polypepilde group covalently attached to a Gi polypeptide. The amino acid sequence of the conjugates differs from that of wild type human GH in at least one introduced and at least of manual for treating a disease, e.g. Turner's syndrome. GHDA), achomicroplasta, chronic renal insufficiency of failure (including renal failure in children), acquired immune deficiency syndrome (ALDS) wasting, cachexia in ALDS patients, or cachexia associated with other diseases. The conjugates are useful for treating a variety of disorders caused by growth hormone inadequacy. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6. PSNREETQOKSNLELLESSLEIGSWLEPVQF-LRSVFANSJVYGASDSNVYDLIKDLEE 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 PSNREETQQKSNLHILLISLLLIQSWLEPVQLGTGPRFVNQHLCGS------HLVE 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | FPITPLSELFDNAM.RAHRERQLAFDTYQEFEFAYIPKEQKYSFLQNPQTSLCFSESIPT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Note: The present sequence is not shown in the specification but is derived from the wild type human growth hormone sequence given in SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 PPIIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT 61
The invention relates to new conjugates, which exhibit growth hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth hormone, placental lactogen, prolactin, active domain, hGH structure-function relationship; segment-substituted polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 58.2%; Score 464; DB 23; Length 191; Local Similarity 71.6%; Pred. No. 6.1e-22; es 103; Conservative 6; Mismatches 20; Indels 19
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The invention relates to identify.og an extrost active demain to a rection of Known amino acid sequence in a parent polyment.de e.g. barts at with homeone (MdH) which has been cloned and has a pre-identified thologist of contact with a turge when the partial polyment is a cative folded form and the lateration is responsible for the hologistal activity expression of Known and acid sequence of polymeptide strature in the region. If known acid sequence of high with the armino acid sequence of a majorate polymeptide (e.g. prolaction of known amino acid sequence of a majorate polymeptide (e.g. prolaction phasental lactorary or porchae around the hormone) which has at least 15% homeory with high alpha-cathon corridinates within about 2.3.5 acquence, where any interaction of the analogue sequence, where any interaction of the analogue sequence. Where any interaction of the analogue sequence, where any interaction of the analogue sequence, where any interaction of the analogue into NNA encoding as analogue by prepride sequence from the sequence from the sequence for analogue into NNA encoding as analogue sequence interaction of the sequence of mologue into NNA encoding the full length kill, and expressing the polymetride (c) contaction (d) reporting series the polymetride (c) contaction (d) reporting series the polymetride (d) contaction (d) reporting series the polymetride (d) represented (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (e) comparing the difference between activity of the first and second segment-substituted polypeptides as an indication of the location of the unknown active domain in nGH. The method is useful for determining
                                                                                           acid sequence by substituting adalog sequents into the parent polypeptide is useful to determine the relationship between structure
                                                                 identifying active domains within cloned polypoptides of known action
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the relationship between stricture and function of known polypeptide sequences. The present sequence is that of human growth hormone mulant substituted with residues from an HGH analogue (prolacin, placental lactogen or pording growth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Note: The present sequence is not shown in the specification but was created by the indexer using the mature NGH sequence and information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (b) and (c) with a second analogous polypeptide search; and(e) comparing the difference between activity of the first at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABG94977 standard: Protein; 191 AA.
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                                                                                                                                                                                                           Example 1; Page -: 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          contained in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-DEC-2002 (first entry)
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WPI: 2002-696875/75
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                191 AA:
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perpendicular the biological activity comprising (a) comparing the amino acid sequence or polypeptide structure in the region of known amino acid sequence of polypeptide structure in the region of known amino acid sequence or polypeptide structure in a region of known amino acid sequence or polypeptide (b) polypeptide (e.g. prolactin, placental lactogen or porcine growth hormone) which has at least 15% homology with high alpha-carbon coordinates within about 2-3.5 angstroms of hormone) which has a least 15% homology with high carbon coordinates within about 2-3.5 angstroms of hormone within the traget. Is afficent from traget interaction of the analogue with the target is different from traget interaction with high analogue with the target is analogous polypeptide segment from the analogue into DNA encoding the full length high, and expressing a segment-substituted polypeptide; (c) contacting the segment: substituted polypeptide (c) contacting the segment: and second analogous polypeptide segment: and second analogous polypeptide segment; and second analogous polypeptide segment.

segment-substituted polypoptides as an indication of the location of the unknown active domain in hGH. The method is useful for determining the relationship between structure and function of known polypoptide sequences. The present sequence is that of human growth hormone mutant substituted at functionally important residues and used in

The present sequence is not shown in the specification but was aby the indexes using the mature hGH sequence and information

contained in the specification.

created by the

191 AA;

Sednence

the method of the invention.

or known amino acid sequence in a parch. polypeptide e.g. human growth connoce (hdt) which has been cloned and has a pre-identified bloiogical activity, where the active domain interacts with a target when the parent polypeptide is in its native-folded form and the interaction is

The invention relates to identifying an unknown active domain in a region

Example 16: Page -: 86pp: English.

function

200

anid sequence by substituting analog segments into the parent polypoptide is useful to determine the relationship between structure Identitying active domains within cloned polypeptides of knows amino

920S-0875204. 920S-0960227. 940S-0190723.

27-AFR-1992; 13-OCT-1992; 26-0CT-1989:

02-FEB-1994 28-CCI-1989

88US-0254611

Wells JA, Cunningham (GETH ) GENENTECH INC

WPI: 2002-696875/75.

95US 0485039 8908-0426066

06 - JUN-1995;

USE428954-BI

Synthetic.

06 - AUG - 2002

Ö 61 PSWREETQGKSNLELLALIS LILLOSMLSPVQF-LRSVFANSLYKGASOSODYHLIKULEE 119 62 PSUREETQOKSULFILGRIS ILLIQSWLEPVQLGTGPRFVNQHLCGS-----HLV---E 111 2 FPTIPLSRLFDNAMLRAHRIHGLAFUTYOFFEBAYIPKEGKYSFLONPGTSLSFSESIPT 61 16; Gaps 58.1%; Score 463; DB 23; Length 191: 71.0%; Pred. No. 7.1e-22; if: indels 3; Mismatches 112 ADYLVCG--ERGFFYTPKTRG1VEQ 134 120 GLOTLMGRIEDG - - SPRIGGIFKQ 141

Growth hormone: placental lactoges, prelacting active density, hoss structure-function relationship; segment-substituted polypeptade:

Homo sapiens.

112 ALYLVCG--ERGFFYTPKIRGIVEQ 134 :: :: ੋ

PSNREFTQQKSNLELLRISLLIGSWLEPVQLGTGPRFVNQHLCGS------HLVE 111 PSNREETUCKSNLELLRISLLLIQSWLEPVQF-LRSVFANSLVAGASDSNVYDLLKDLEE 119

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2 FPTIPLSKLFUNAMLKAHKLHULAFDTYQEFEBAYIPKEQKYSFLQNPQTSLSFSESIPT

58.1%: Score 463; DB 23; Length 191; 76.3%; Pred. No. 7.1e-22; Live 7; Mismatches 20; Indels 16

Pred. No. 7. 7; Mismatches

Sest Local Similarity 70.3 Matches 102; Conservative

Similarity

viery Match

61

16;

120 GIQTLMGKLEDG---SPRTGQIFKQ 141

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1 MEPTIPLANDA DAMIRAN FLIGGRAPHY CHEERAN PRECKYSELONE CESSES SECTION FROM THE CHEEK TH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Segment of B-cell stimulatory factor-2 (12.5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B-cell stimulatory factor-2: interleukin-5.
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                                                                                                                                  AAR05313 standard: protein; 144 AA.
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N-PSDB; AAQ02028.
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AAROS313
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Search completed: September 16, 2003, 12:38:27 Job time: 45.358 secs

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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 1:
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                                                                                                                                                    September 15, 2003, 12:37:10 / Search time 23:53 Seconds (without distances); 265:217 Millon cell updates/sec
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GenCare version 5.116
Copyright (c) 1993 - 2003 Compuser Ltd.
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Maximum Match 100%
Disting first 45 symmaties
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Sequence 6, R
Sequence 2, R
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Parent 1, Application US/28093883
Parent 1, Application US/28093883
Parent No. 5483529
Caseral Information:
APPLICANT DeHoer, Herman A.
APPLICANT Heyneker, Herbert D.
APPLICANT Peter N.
IITLE OF INVENTION: DNA for Expression of Sovine Growth Hormone NUMBER OF SECURATION: 36
CORRESPONDENCES: 36
CORRESPONDENCES: 36
CORRESPONDENCES: 1000.
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WEDLUM TYPE: 5.25 http://doi.org/10.000/TER MEDARLE FORM:
WEDLUM TYPE: 5.25 http://doi.org/10.000/TER MEDIUM TYPE: 5.25 http://doi.org/10.000/TER-TIME SYSIEM: PC-LOS/MS-DGS
SPERMING SYSIEM: PC-LOS/MS-DGS
SPERMING SYSIEM: PC-LOS/MS-DGS
SPERMING SYSIEM: US/CB/O93.385
FILING CARE: 14-JUL.1993
CLASSIEICATION NUMBER: US/CB/O93.385
PRIOR APPLICATION DATA: 28-NOV-1990
PRIOR APPLICATION NUMBER: G7/198824
FILING DATE: 28-NOV-1990
PRIOR DATE: 05-APR-1988
PRIOR APPLICATION NUMBER: G6/53261
FILING DATE: 19-JUL-1984
PRIOR APPLICATION NUMBER: G6/33367
FILING DATE: 19-JUL-1984
PRIOR APPLICATION NUMBER: G6/33367
FILING LATE: 18-SSP-1981
ATICKNEY/AGENT INFORMATION:
                                                                                                                                                                                               NAME: Johnston, Scan A. REGISTRATION NUMBER: P35,910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 46
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3562
TELEFAX: 415/952-9881
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4 FPTIPLSELFUNAMLRAHREHQEAFDIYQEFEBAYIPKEQKYSFLQHPQTSECFSESIPT 63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 57.8%; Score 461; DB 2: Length 194; 76.3%; Pred. No. 3.8e-42; tive 7; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patentin Release #1.0, Version #1.25
                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Dr. Estelle J. Tsevdos
STREGT: 1937 West Main Street, P.O. Box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: American Cyanamid Company
STREET: One Cyanamid Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125 GIQTLMGREEDG---SPRTGQIFKQ 144
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 31,278-01
TELECOMNUMICATION INFORMATION:
TELEPHONE: 203-121-2756
TELEFACOR: 203-321-2971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASS_FICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/766,142
FILMG DATE: 25-SEP-1991
AFFORNEY/AGENT INFORMATION:
NAME: TSGVGOS, ESTGLIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/383,62
                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: LWA PC compatible
CREATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Daley, michael J.
APPLICANT: Cady, Susan M.
APPLICANT: Cady, Susan M.
APPLICANT: Shieh, Hong Wing
APPLICANT: Shieh, Hong Wing
APPLICANT: Seddon, Acdrew P.
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Parent No. 6010999
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INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
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Matches 102; Comservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MCLECULE TYPE: protein
                                                                                                                                                                                                                     STATE: Connecticut
NUMBER OF SEQUENCES:
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ZIP: 06904-0060
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CLASSIFICATION:
                                                                                                                                                                     Stanford
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-383-621-4
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US-28-459-906-4
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D
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APPLICANT: Saldaran Patrera
APPLICANT: Saldaran Batar Patrera
APPLICANT: Saldaran Batarera
TITLE SI NVENTION: Genetically Modified Methylotrophic F. pascorns Yeast
TITLE DE INVENTION: Genetically Modified Methylotrophic F. pascorns Yeast
TITLE DE INVENTION: Production and Secretion of the Human
FILE PERERBUCE: 1829,0016000
CURRENT FILEND APPLICATION NUMBER: US/09/284,878
CURRENT FILEND APPLICATION NUMBER: PCT/MX97/60033
PRIOR FILING DATE: 1597-10-24
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                                                                                                                                                                                                                                                                                                     1 MEPTIPLSKLEDNAMLRABRLEGLAFDIYOREERAYIPKEGKYSELQNPQTSLSFSESIF 60
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APPLICANT: Galoy, Michael J.
APPLICANT: Galoy, Susan M.
APPLICANT: Shieh, Hong-Ming
APPLICANT: Shieh, Hong-Ming
APPLICANT: Boblen, Peter
APPLICANT: Seddon, Andrew P.
APPLICANT: Seddon, Andrew P.
TITLE OF INVENTION: Stabilization Ct Scratolropius And Tuber
TITLE OF INVENTION: Proteins By Modification Ct Cysteine Pessification
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                                                                                                                                Longth 1928
                                                                                                                           Score 465: DB 1: Bongth 192
Pred. No. 1.16-42;
7: Mismatches 20: Indels
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Pred. No. 3.7e-42;
7; Mismatches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111 EALY:VGG - ERGFFYPPRIRG:VEG 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 5, Application 05/59284978
Patent No. 6342375
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/ Patent No. 5951972
/ GENERAL INFORMATION:
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                                                                                                                           58.5%;
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                                                                                                                      Query Match
Best Local Similarity 70.59
Matches 103; Conservative
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Best Local Similarity 70.33
Matches 102; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-284-878-5
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                            US-08-093-383-1
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SEQ ID NO 5
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SCFTWARE: Patentin Felease #1.0, Version #1.30 CURRENT APPLICATION DATA:
                   MAKE: Highlander, Steven D.
BASISTRATION UNDREK: 47,642
REFFENCE/DOCKET NUMBER: USD:426\HYL
THIRONMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Halban, Philippe A.
No. 6116797mington, Karl D.
Clark, Samuel A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112 ALYLVCG--ERGFFYTPKTRGIVEQ 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146 GIQTLMGRLEDG---SPRTGOIFKO 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/784,582
FILING DATE: Concurrently Herewith
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P.O. Box 4433
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FILING DATE: 15-0CT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Newgard, Christopher B. APPLICANT: Balban, Philippe A. APPLICANT: No. 6110707mington, Kar APPLICANT: Clark, Samuel A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDICM TYPE: Floppy disk
CCMPGIER: IEM PC compatible
CPPERAIING SYSTEM: PC DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S-68-784-582-10
Sequence 10, Application US/08784582
Fatent No. 6110707
                                                                                               INTEPHONE: (512) 418-3600
TELEPAX: (512) 474-7577
INCHMATION FOR SEQ ID NO. 10: 26UENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Thigpen, Anice E.
Quaade, Christian
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                 : 217 amino acids
amino acid
                                                                                                                                                                                                                                                                                             Query Match
Sost Local Similarity 70.3%
Warches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Thigpen, Ani
AFFLICANT: Quaade, Chri
AFFLICANT: Krise, Fred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
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TOPOLOGY:
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APPLICANT: NewGrad, Christophor B.
APPLICANT: No. 6087122mingron, Karl D.
APPLICANT: Clark, Samuei A.
APPLICANT: Clark, Samuei A.
APPLICANT: O'aade, Christian
APPLICANT: O'aade, Christian
APPLICANT: O'aade, Christian
APPLICANT: O'aade, Christian
APPLICANT: O'accept Cell Expression or Proteins From TITLE OF INVENTION: Secretory Cell Lines
NUMBER OF SEOUENCES: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.8%; Score 461; DB 3; Length 194; 70.3%; Pred, No. 3.8e 42; tive 7; Mismatches 20; indels
                                                                                        SOFTWARE: Patentin Release 41.0, Version 41.25 CUBRENT APPLICATION DATA: APPLICATION NUMBER: US/OR/459,906 FILING DATE: 02-JUN-1595 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          112 ALYIVGG--ERSEFYTEKTRGIVED 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 GIGTIMGRIBDS --- SPRIGGIFKC 144
                                                                                                                                                                                                                                                                 31,278-03
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FILING DATE: Concurrently Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arrold, White 6 Durkee
STREET: P. O. 30x 4433
                              MEDIUM TYPE: Floppy disk
COMPUTER: JBM PC compatible
OPERATINS SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10. Application 0S/08583028
Patent No. 6087129
GENERAL INFORMATION:
                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: Webster, Darryl L.
REGISTRATION NUMBER: 34,275
REFRENCE/COCKET NUMBER: 31,27
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-831-3247
TELERAX: 201-831-3305
                                                                                                                                                                                                                                                                                                                   TELEFAX: 201-831-3305
INFORMATION FOR SEC ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 194 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 77210-4433
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 70.33
Matches 102, Conservative
          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy o
                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                       TOPO: OGY:
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US-08-589-028-10
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62 PSNREETQUKSNLEILRISLILIQSWLEPVQLGTGPRFVNQHLCGSS------HLVE 111
                                                                                                                          2 FPTIPLSRLFDNAMLRAHRLHQLAFDIYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT
                                                    Gaps
                                                 20; indels 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: MCGATY, Dennis
TITLE OF INVENTION: RECOMBINANT EXPRESSION OF PROTEINS FROM
TITLE OF INVENTION: SECRETORY CELL LINES
CORRESPONDENCE: 79
CORRESPONDENCE ADDRESS:
57.8%; Score 461; DB 3; Lengt; 217; 76.3%; Pred. No. 4.4e-42; Live 7; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 15-0CT-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/589,028
FILING DATE: 19-JAN-1996
ATTORNEY/AGENT INFORMATION:
NAME: Highlander, Steven L.
REGISTRATION NUMBER: 37,642
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TELEPHONE: 415 cc.
TELEPHONE: 415 cc.
TFFFAX: 415-496-1200
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
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32..53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
94..115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Palo Alto
STATE: California
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                                     linear
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                   STRANDEDNESS
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LOCATION:
FEAIURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                     : TOPOLOGY:
US-68:785-271-10
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US-28-759-628-11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
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TITLE OF INVENTION: SECRETCRY CELL LINES
NUMBER OF SECTENCES: 56
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                     57:8%; Score 461; DB v: Length 277; 76:3%; Pred. No. 4:4e-42; Live 7; Mismatches 20; Todets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Newgard, Christopher B.
APPLICANT: Newgard, Philippe A.
APPLICANT: No. 619476mington, Karl D.
APPLICANT: Clark, Samuel A.
APPLICANT: Thigpen, Anice E.
APPLICANT: Quade, Christian
APPLICANT: Kruse, Fred
                                                                                                                                                                                                                                                                                                                                                                                                           112 ALYLVCG - - ERGFFYTPKTRGIVEC 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/785,271
FILING DATE: Concurrently Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSNE: Arnold, White s Durkee
STREET: P.O. Box 4433
CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: Concurrently Herewith CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/555,028
FILING DATE: 19-0NN-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: UTSD:513
TELECOMMUNICATION INFORMATION:
UTSD:514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/03785271 Patent No. 6194175
            TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3000
TELEPAX: 512/474-75-7
INFORMATION FOR SEQ ID NO: 10: 5EQUENCE CHARACTERISCICS:
LENGTH: 217 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Highlander, Steven L. REGISTRATION NUMBER: 37,642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 512/474-7577
INFORMATION FOR SEG ID NO: 10:
SEQUENCE CHARACTERISTICS:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  512/418-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 amino acids
                                                                                                                                                                                                 Quory Match
Best Local Similarity 70.3%
Matches 102: Conservative
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                                                                                                                                                       incar
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                                                                                                                                   STRANDEDNESS
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                                                                                                                                                                     US-58-784-582-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-785-271-10
                                                                                                                                                       TOPOLOGY
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STANDUNGS: Incer

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TITLE OF INVENTION: Process for proparing recombinant proteins using highly grant and sacharomyces cevevisy.
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APPLICANT: Higashikun: Nachiko

APPLICANT: Higashikun: Nachiko

APPLICANT: Higashikun: Nachiko

APPLICANT: Higashikun: Nachiko

APPLICANT: Kondo, Masaaki

APPLICANT: Kondo, Masaaki

APPLICANT: Kondo, Masaaki

APPLICANT: Kondo, Masaaki

APPLICANT: Nachikori PREPARING USEFU, POLYPEPTIDES THROUGH EXPRESSION OF THE

ITLE OF INVENTION: DNAS

FILE REPERENCE: 82.1026

CURRENT RPILOM DNABER: US/09/280,030A

CURRENT FILING DATE: 1999-03-26

EARLIER APPLICATION NUMBER: 2710-87339/1998

EARLIER PILING DATE: 1998-03-31

NUMBER OF SEQ ID NOS: 66

SOFTWARE: PatentIn Ver: 2.0

SEQ ID NO 66

LENGTH: 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 PSNREETQQKSMLELLRISHALIQSWLEPVQLGTGFRFVNQHLCGS-----HLVE 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 FPTIPLSRLFDNAMURAHRIHOLAFDTYOEFEEAYIPKEQKYSFLQNPOTSLSFSES.PT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 4; Length 241;
                                                                                                                                                                                                                                                                                                                                      ZIP: 0510-2802
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Overy Match 57.8%; Score 461; D8 4; Length 24 Nest Local Similarity 70.3%; Pred. No. 5e-42; Matches 102; Conservative 7; Mismatches 20; Indels
                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: BACHMAN & LAPCINTE, P.C.
STREET: Suite 1201, 900 Chapel Street.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/424,620B
FILING DATE: 24-No. 6391585-1999
INFORMATION FOR SEQ 1D NO: 25:
SEQUENCE CHARACTER:STICS:
TEMOTH: 241 anino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM
OPERATING SYSTEM: WINDOWS 95/98
SOFTWARE: MS WORD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
MOLECULE TYPE: PROTEIN
SEQUENCE DESCRIPTION: SFO ID NO: 25:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112 ALYLVGG -- ERGFFYTPKTRGIVEQ 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-07-280-030-66
. Sequence 66. Application US/09280030A
. Patent No. 6506595
MGON, Jae-Woong
BAE, Cheon-Scon
                                                                                                    SEONG, Baik-Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                               YANG, DoorSuk
LEE, See-Won
                                                                                                                                                                                                                                                                       CITY: New Haven
SIATE: Connecticut
                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
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SENERAL INFORMATION.

APPLICANT: Saldara, Martha Guerrero

APPLICANT: Saldara, Hogo Barrera

TITLE OF INVENTION: Genetically Modified MacHigorraphic F. pastoris Forst to: U.e.

TITLE OF INVENTION: Genetically Modified MacHigorraphic F. pastoris Forst to: U.e.

TITLE OF INVENTION: Genetically Modified MacHigorraphic GORGENT APPLICATION NUMBER: US/09/284,878

CORRENT FILING DATE: 1999-37-21

PRIOR APPLICATION NUMBER: PRII/XX57/c6033
                                                                                                                                                                                                                                                                                                                                                                                                                                                        87 FSNREETOOKSNEELLRISHLIQSWIEPVQF-LRSVFANSLVYGASDSNVYHLLKHHEE 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62 PSNREETOOKSNLELLRISLLLIQSWLEPVOLGTGPREVNQHLCGS------HIVE 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 FPTIPLSRIEDNAMLRAHFLUGLAFDIYQEFEBBAYIPKEGKYSFLQNTOTSLSFSESHTT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQRFEEAYTPKEQKYSFLQNFQTSLSFSFSIFT 61
                                                                                                                                                                                                                                                                                                                                                    27 FPTIPLSRLEDNAMLRAHRLHQLAFOTYQEFEEAXIPKEQKYSFLQNPQTSLCESESIPT 86
                                                                                                                                                                                                                                                                          16; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57.8%; Score 461; DB 4; Longth 217; 70.3%; Pred. No. 4.46-42; Live 7; Mismatches 20; Indels
                                                                                                                                                                                                                        Score 461, DB 3; Length 217;
Prod. No. 4.46-42;
7; Mismatches 20; Indels
                                                                                                                   /potew "The peptides above and depicted in Figure 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: HANLE SYNTHETIC FIBER CO., LTD. JANG. Ki-Ryong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        146 GIQTLMGRLEDG---SPRTGQIFKO 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112 ALYLVOG - - ERGFFYTPKIRGIVEQ 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            112 ALYLVCG -- ERGFFYTPKTRGIVEQ 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1. Application US/09284978
Patent No. 6342375
GENERAL INFORMATION:
APPLICANT: Olazaran, Martha Guerre
                                                                                                                                                                                                                        57.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1997-10-24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 70.3
Matches 102, Conservative
                                                                                                                                                                                                                                                                          Matches 102; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER:
PRIOR FILLNG DALE: 1997-1
NUMBER OF SEQ ID NOS: 9
                                                                       NAME/KEY: Peptido
LOCATION: 192..210
CTHER INFORMATION: Z
Peptide
143...154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens
                                                                                                                                                                                                                          Query Match
Best Local Similarity
                          LOCATIONS
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 217
                                                                                                                                                                           US-08-759-628-11
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US-09-284-878-1
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SEQ ID NO :
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Query Match
Best Local Similarity
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Best Local Similarity
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APPLICANT:
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                                                                                                                                                                                                                                                                                                          2 PPT_PESRLFUNAMURAHELHQLAFCTYQFFEAYTFKEGKYSFLONPOTSLSFSESTFT 51
                                                                                                                                                                                                                                    SUED 191
OTHER INFORMATION: Description of Artificial Seguence: Designated at OTHER INFORMATION: an amino acid sequence of MWPsp-MWPzp20-IEV-G-GH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 62 PSNREETQQKSNLELLHQSWLEPVQLGTGFFFVUJHLGGS----
                                                                                                                                               Query Match 57.8%; Score 461; DB 4; Togath 245; Best Local Similarity 70.3%; Pred; No. 5.2e-42; Matches 102; Conservative 7; Mismatches 26; Indels
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COMBUTER: IBM PC compatible
COMBUTER: IBM PC compatible
COPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATCHIN RCHEASE F1.0, Version #1.33
CURRENT APPLICATION DATE:
APPLICATION NUMBER: US/08/784,582
FILING DATE: CONCULTANTLY Rerewith
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   s: Arrold, White & Durkee P.O. Box 4433
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> Patent No. 5110707
> GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37,642
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INFORMATION FOR SEQ 1D NO: 71:
SEQUENCE CHARACTERISTICS:
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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MEDICH TYPE: Floppy
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CITY: Houston
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US-08-784-582-71
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62 PSNREETQQKSMLELLRISLL1,1QSWLEPVQLGTGPRFVNQHLCGS------HLVE 111
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                                                                                                                               Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Thigpen, Anice E. Quaade, Christian Kruse, Fred McGarry, Dennis McGarry, Dennis NVENTION: RECEMBENT EXPRESSION OF PROTEINS FROM NVENTION: SECRETORY CELL LINES
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57.8%; Score 461; DB 3; Length 274; 70.3%; Pred, No. 6e-42; ive. 7; Mismatches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE OPERATING SYSIEM: PC POS/MS-DOS SOFTWARE: Patentin Release #1.6, Version #1.36 CURRENT APPLICATION DATA: REPLICATION NUMBER: US/08/784,582 FILING DATE: CONCULTENTLY HERWITH CLASSHICATION DATA: APPLICATION NUMBER: US C8/589,028 FILING DATE: 19-5an-1996 ALTORNEY/AGUNI INFORMATION: NAME: Highlander: Steven L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Newgard, Christopher B. APPLICANT: Habbar, Philippe A. APPLICANT: No. 6110797mington, Karl D. APPLICANT: Clark, Samuel A.
                                                                                                                                                                                                                                                                                                112 ALYLVCG - - ERGFFYTPKTRGIVEQ 134
                                                                                                                                                                                                                                                                                                                                           146 GIQTLMGRLEDG---SPRTGQIFKQ 167
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Sequence 73, Application US/08784582
Parten: No. 6.16707
GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO: 73:
SEQUENCE CHARACTERISTICS:
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                                                   Matches 102; Conservative
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TITLE OF INVENTION: REC
TITLE OF INVENTION: SECURISES: 79
CORRESPONDENCE ADDRESS:
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STREET: P.O. Box 4433
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62 PSNREETQQKSNLELLRISILLIQSWI.EPVQLGTGPRFVNQHLCGS------HLVE 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: FERRARC, GREGORY D.
RECTSITRATION NUMBER: 36.134
REFERENCE/DOCKET NUMHER: 325800-55
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1750
TELEPHONE: 201-994-1744
INFURATION FOR SED ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 217 AMINO ACIDS
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CORRENT APPLICATION DATA:
APPLICATION NUMBER: 08/06/187,756C
FILLNO DATE: January 27, 1994
CLASSIFICATION: 435
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AMING ACID
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Sest Local Similarity 69.70
Matches 101; Conservative
                                                                                                                                                                                                                                                             PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILLIG DATE:
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Fater No. 634844
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TILLE OF INVENTION: GLACK Homone to stimulate hematopolesis and immune reconstitute OF INVENTION: effect hematopoletic stem cell transplantation in humans
TILLE OF INVENTION: after hematopoletic stem cell transplantation in humans
FILE REFERENCE: CRAPPEL-6.1
CURRENT APPLICATION NUMBER: 05/09/465,461
CURRENT APPLICATION NUMBER: 65/112,668
PRIOR APPLICATION NUMBER: 65/112,668
PRIOR FILING DATE: 1998-12-7
NUMBER: PARENT PLING OFFE: 1998-12-7
NUMBER: PARENT PLING OFFE: 1998-12-7
NUMBER: PARENT PLING OFFE: 1998-12-7
NUMBER: PARENT PA
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| HTTP-1111 | THTP-1111 | THTP-1111 | THTP-11 | THTP-111 | THTP-111 | THTP-111 | THTP-1111 | THTP-11111 |
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                                                                                                                                                                                                    27 PPT1PESRLEDNAMLRABREGLAFOTYOFFERANTERFORVSFLONITSETE SESTET ++
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69.74; Pred, No. 1.7e-41;
tive 7; Mismatches 21; indels
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       7; Mismatches
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APPLICANT: ROSEN, ET AD.
TITLE OF THYENTEN: HUFARLOS:
HUMBER OF SEGIENCES:
CORRESPONDENCE ALDREDS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETIE
COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
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Patent No. 5597709
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       102; Conservative
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CRGANISM: homo sapiens
US-09-465-461-1
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STATE: NEW JERSEY
COUNTRY: USA
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September 16, 2003, 12:38:55 : Search tire 47.2753 seronds (without alignments) 472:415 Million ceil updates/sec
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/con2_/ptodata/2/pubpaa/US10_igHsCOMB.pep.*
/cqn2_6/ptodata/2/pubpaa/US10_igHsCOMB.pep.*
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/cgn2_6/ptodata/2/puppaa/056__0860M5_pop;*
Genford version 5.1.6
Copyright (c) 1993 - 2003 Compages Ltd.
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                                                                                                                                                                                                                                                                                                                           556259 seqs, 148393369 residues
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Maximum Match 100%
Listing first 45 summaries
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                                                                         OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2600003060
                                                                                                                                                                                    US-09-423-100-7
                                                                                                                                                                                        Title:
Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being princed, and is derived by analysis of the total score distribution.

Description	Sequence 7. Appli	ni š			Sequence 6, Appli Sequence 6, Appli	-		THANK OF DOMESTIC
SUMMARIES ID	4 US-10-054 873-7 4 US-10-054-873-6	4 US-10-054-873-2 1 US-09-984-010-23	2 US-16-153-207-1 2 US-10-409-377-1	2 CS-10-400-708-1 2 US-10-298-148-1	2 US-10-153-207-6 US-09-929-918-9	US-09-280-030-66	2 US-09-969-748C.4 0 US-09-804-409A-16 1 US-09-853-688-4	
% Query Match Length DB	150 1	92 1	191	191	214 3	245 9	217 1 217 1 217 9	
% Query Match	100.0	59.0	57.8	57.8	57.8	57.8	57.1 57.0 56.2	
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CS-09-624-200- CS-10-306-822- US-10-268-822- US-09-850-887-3 US-10-103-207- US-10-103-207- US-10-103-207- US-10-108-266- US-10-108-267- US-09-861-687- US-09-861-8873- US-09-861-8873- US-09-861-8873- US-09-861-8873- US-09-736-611-8 US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-740-853- US-09-861-883- US-09-861-883- US-09-861-883- US-09-861-883- US-09-88	US-10-9888 9358-5 US-10-028-410-3 US-09-247-563-4 US-09-775-631-12 US-09-776-33-4 US-09-894-711-12 US-09-894-711-10 US-09-740-359-10 US-09-740-359-10 US-10-066-009A-3 US-10-066-009A-3 US-09-205-658-125
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# ALIGNMENTS

Scauence 7, Application US/10054873

Scauence 7, Application No. 0320020144712A1

GENERAL INFORMATION: Chimeric Protein Containing an Intramolecular Chaperone-Like Sequence CREECANT: Gan. Zhong Rul Intramolecular Chaperone-Like Sequence CREESCANDENCE ADDRESS: ADDR

us-09-423-100-7.rapb

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61 TPSNREFTQQKSNLELLRISLLLIQSWLEPVOLGTGPRFVNQHLGGSHLVEALYLVGGER 120
  1 MFPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAY1PKEQKYSFLQNP---------- 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 94111-3834
                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
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Best Local Similarity
Matches 92: Conserv
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CS-09-984-010-23
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                                                                                                                                                                                                          1 MEPTIPLSRIFDNAMIRARRIHQLAFDTYQBFBRAYIPKEÇKYSFLÇNPƏTSLSFSESIP 69
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Sequence 6, Application US/18054873
Publication No. US20020164712A1
GENERAL INFORMATION:
AFFLICATION Chimetic Protein Containing an Intracecond Chaptering Intracecond Intracecond Chaptering Inke Septement
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                                                                                                              Score 797; UR 14; Length 150;
Pred. No. 1.48-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: 1BM PC compatible

OORGATING SYSTEM: PC-DCS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.36

CURRENT APPLICATION DATA:

APPLICATION NOWER: US/10/054,973

Filing DATE: 22-Jan-2002

CLASSIFICATION: CURRENT WATCH COMPANY

CLASSIFICATION: CURROWN?
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REGISTRATION NUMBER: 46,946
REFERENCE/DOCKET NUMBER: 020167-000130US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: WC PCT/CN98/00652
FILLING DATE: 31-MAR-1998
APPLICATION NUMBER: US 69/423,160
FILLING DATE: 11-DEC-2066
                                                                                                                                                                                                                                                                                                                                                            121 GEFYTPKTRGIVEGOCTSIOSLYGJENYCN (50
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                COPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
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LENGTH: 107 amino acids
STRANDEDNESS: <Unknown>
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                                                                                                            Query Match
Best Local Similarity (09.0%)
Matches 150: Conservative 6.
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STAIE: California
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CORRESPONDENCE ADDRESS:
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Matches 107; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Chimeric Protein Containing an Intramolecular Chaperone-Like Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
OMPUTER: 18M PC Compatible
CERRALING SYSTEM: PC-DOS/KS-DGS
SOFTWARE: Patentin Rolease #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
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INFORMATION FOR SEQ 1D NO: 2:
SHOUTHON FOR SEQ 1D NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 470; DB 14;
Pred. No. 1.5e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: WG PCT/CN98/00052
FILING DATE: 31-MAR-1998
APPLICATION NUMBER: US 09/423,100
FILING DATE: 11-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59.0%; Scc. 100.0%; Pred. No. 100.0%; Pred. No. 100.0%; Pred. No. 100.00%; Pres. 
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                                                        CURRENT APPLICATION DAIA:
APPLICATION NUMBER: US/10/054,873
FILING DATE: 22-Jan-2002
CLASSIPICATION: <UNKNOWN>
121 GFFYTPKTRGIVEQCCTSICSLYQLENYCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : TOPOLOGY: Linear NO.ECUE TYPE: protein : SEQUENCE DESCRIPTION: SEQ ID NO: 2: US-16-054-873-2
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REGISTRATION NUMBER: 46,946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 23, Application US/09984010 Publication No. US20030104578A1 GENERAL INFORMATION:
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Publication No. 05505020.64712A1
GENERAL THFORMATION: Aborg Ru
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Length 191; 26; Indels

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62 PSNREETQOKSNLELLRISLALIOSWLEPVQLGTGPRFVNOHLCGS------HLVE 111
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                                                                                                                                                                                                                                           57.8%: Score 461; DB 12; 70.3%; Pred. No. 3.9e-43; Live 7; Mismatches 26;
      PRICE FIGUNG DATE: 1989-15-26
PRICE APPLICATION NUMBER: 07/264,611
PRICE FILING DATE: 1986-10-28
SUPPRESTY SEQ ID NOS: 20
SUPPRESTY FASTSEQ ION Windows Version 4.0
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112 ALYLVCG--ERGFFYTPKTRGIVEQ 134
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                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                    : DENOTH: 191
: TYPE: PRT
: CRGANISM: Homo Saplens
:S-10-153-207-1
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Best Local Similarity
Matches 102; Conserv
                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Marches 102; Conserv
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                                                                                                           ADDRESSEE: FINNEGEN, HENDERSON, FRANKOW, GARREIT & DOINNER, TOP
STREET: 1300 I Street, NW
APPLICANT: Ballance, Devid James
TITLE OF INVENTION: RECOMBINANT FUSION PROTEINS TO GEOMPHERINGENT
AND SEROM ALBUMAIN
                                                                                                                                                                                                                                                                      COMPUTER: IFM TOTAL COMPATION COMPATION OF COMPUTER: THAT TOTAL COMPATION SYSTEM: PC-LOCS/MS-LOCS SOFTAMENT PC-LOCS/MS-LOCS CURRENT APPLICATION DATA:

RELIGION DATE: 10.5/09/984,016
FILING DATE: 21.487-2002
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 09/091,873
FILING DATE: 25-JCN-1998
APPLICATION NUMBER: PCT/CB96/03164
FILING DATE: 19-DEC-1996
INFORMATION FOR SQUID NO: 23:
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Pred. No. 3.9e-43;
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Publication No. US20030153003A1
GERRAL THORNATION:
APPLICANT: UNCRANTION:
APPLICANT: Brian C. Cunninghar
TITLE OF INVENTION: GROW'H HORNONE VARIANTS
FILE REFERENCE: 669.12-US-7
CURRENT FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: 08/479,864
PRIOR APPLICATION NUMBER: 08/479,864
PRIOR PILING DATE: 1995-06-07
PRIOR FILING DATE: 1994-02-02
PRIOR APPLICATION NUMBER: 07/960.22
PRIOR APPLICATION NUMBER: 07/960.22
PRIOR APPLICATION NUMBER: 07/960.22
PRIOR APPLICATION NUMBER: 07/960.22
PRIOR PILING DATE: 1992-04-03
PRIOR PILING DATE: 1992-04-03
PRIOR PILING DATE: 1992-04-03
PRIOR PILING DATE: 1992-04-27
PRIOR PILING DATE: 1992-04-27
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US-09-984-010-23
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                                                                                                                                                                                         COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 191 amino acida
TYPE: amino acid
STRANDEDNESS: <0sknown:
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Bost Local Similarity 70.3%;
Matches 102; Conservative
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                                                                  NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS
                                                                                                                                                        CITY: Washington
STATE: DC
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US-10-153-207-1
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                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Cox III, George N
APPLICANT: Bolder Blocechoology, Inc.
IIILE CP INVENTION: Derivatives of Growth Hormone and Related Proteins
FILE REPERENCE: 4152-1-PUS
FILE REPERENCE: 4152-1-PUS
FILE REPERENCE: 2003-26-26
PRIOR PELLING DATE: 2003-26-26
PRIOR APPLICATION NUMBER: US/09/462,941
PRIOR APPLICATION NUMBER: US/09/462,941
PRIOR APPLICATION NUMBER: 600-01-14
PRIOR APPLICATION DATE: 1997 07-14
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US-10-400-377-1
Sequence 1, Application US/10400377
Publication No. US2030162949Al
GENERAL INFORMATION:
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Sequence 1, Application US/10400708
Publication No. US200301668654:
GENERAL INFORMATION:
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SEC ID NO 1
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Publication No. US20341712843.

GENERAL INFORMATION.

APPLICANT: COM. TIT. George N.

APPLICANT: Bolder Biotechnology, Inc.

TITLE OF INVENTION. Derivatives of Growth Hormons and Related Presents of TITLE OF INVENTION. Derivatives of Growth Hormons and Related Presents of TITLE OF INVENTION. Derivatives of Growth Hormons and Related Presents of USES1-POS.

CURRENT FILING DATE: 2002-11-15

PRIOR APPLICATION NUMBER: 60/C52,516

PRIOR APPLICATION NUMBER: 60/C52,516

PRIOR FILING DATE: 1997-07-14

NUMBER OF SEQ ID NOS: 41

SOCTWARE: Patentin Ver. 2.0

SED ID NO.
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76.3%: Pred. No. 3.4e-43;
tive 7: Mismatches 25; indois 16: Leps
                                                                                                                                           TITLE OF INVENTION DEFINATIONS OF THE OFFICE AND THE OF INVENTION DEFINATIONS OF THE OFFICE AND 
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                                                                                      Rolder Biotechnology, Inc.
APPLICANT: COX III. George N
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Matches 102, Conservative
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62 PSNREETQQKSNLELLRISHLIQSWLEPVQLGTGPRFVNQHLGSS------HLVE 111
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APELICANT: Cherrykh, Svitlana I.
APELICANT: Cherrykh, Svitlana I.
APELICANT: Slavcherko. Iryna Yu.
APELICANT: Slavcherko. Iryna Yu.
APELICANT: Slavcherko. Iryna Yu.
APELICANT: Blavcherko. Iryna Yu.
APELICANT: PHAGE-DEPENDENT SUPER PRODUCTION OF
TITLE OF INVENTION: BIOLOGICALLY ACTIVE PROTEIN AND PEPTIDES
FILE REFERENCE: PHAGE.006A
CURRENT APELICATION NUMBER: US,05/929.918
FR.OR FILING DATE: 1999-05-25
PR.OR FILING DATE: 1999-05-25
Sequence 6. Application US/20153267
Publication No US200301530331
GENERAL INFORMATION:
APPLICANT: James A. Wells
APPLICANT: Brian C. Cunningham:
TITLE OF INVENTION: GROWTH HORMONE VARIANTS
FILE REFERENCE: 669.12-05-02
CURRENT FILING DAIE: 1995-06-07
PRIOR APPLICATION NUMBER: 05/179,884
PRIOR FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: 05/190.22
PRIOR FILING DATE: 1992-01-13
PRIOR APPLICATION NUMBER: 07/966,227
PRIOR FILING DATE: 1992-04-13
PRIOR FILING DATE: 1992-04-13
PRIOR FILING DATE: 1982-04-26
PRIOR FILING DATE: 1982-04-27
PRIOR FILING DATE: 1989-10-26
PRIOR APPLICATION NUMBER: 07/426,666
PRIOR FILING DATE: 1989-10-26
PRIOR APPLICATION NUMBER: 07/264,611
PRIOR APPLICATION NUMBER: 07/264,611
PRIOR APPLICATION NUMBER: 07/264,611
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SCFTWARE: FastSEO for Windows Version 4.0
SEQ ID NO 9
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Nest local Similarity 70.38
Matches 102, Conservative
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OS 10-153-207-6
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US-09-929-918-9
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112 ALYLVCG - ERGFFYTPKTRGIVEQ 134
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Best Local Similarity 69.79
Matches 101, Conservative
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                                                                                                                                                               7 TYPE: PRT
GMGANISM: Homo sapiens
GS: 09-853-686-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-03-969-748C-4
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                                                                                                                                            LENGTH: 217
                                                                                                                       SEC ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEC 1D NO 4
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Sequence 66, Application US/39260316A

Pation No. US/201012155Ai

GENERAL INFORMATION:
APPLICANT: Sato, Saij

APPLICANT: Grashikuni, Nachiko
APPLICANT: Grashikuni, Nachiko
APPLICANT: Grashikuni
APPLICANT: Grashikuni
APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Toshiyuki
APPLICANT: Kudo, Massaki
IIILE OF INVENITON: DNAS ENCODING NEW FUSION FROTEINS THROUGH EXPRESSION OF THE REFERENCE: 382.1026
CORRENT APPLICATION NUMBER: US/09/280,630A
CURRENT PILING DATE: 1999-37.26
EARLIER PILING DATE: 1999-37.26
EARLIER FILING DATE: 1999-37.26
EARLIER FILING DATE: 1999-37.26
EARLIER FILING DATE: 1999-37.26
EARLIER FILING DATE: 1999-67.31
EARLIER FILING DATE: 1999-67.31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 PSNREETQQKSNLELLRISHLIGSMLEPVGLGTGPRFVNOHLGGS++ ++++ HEVB [1]
                                                                                                                                                                                62 PSNREETGOKKNEELLETSLLLISSWIERV GEGTSBREVNOBLAGS ------ BLVF 111
HTTSTHILTSTHILT HTTSTHILT
                                                                                                                                                                                                                             87 PSNREETQQKSNLELLRISLLLIQSWLEPVQF-LRSVFANSLVYGASDSNVYDLLKIJLER 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 PPTIPLSRLFDNAMLRAHRUHGLAFDTVQBFBEAYIPKECKYSFLUNPQ1SLSFSEK1PT 61
                                                                                        2 PPTIPLSRLFUNAMERABULEQLAFOTVQEFERAVIFKEQKTSFLQNFOTSLGSESIFT 01
                                                                                                                  27 PPTFFLSRLEDMAMLRAHMLEQLAFOTYQGBEERAYTEKEQKYSFLOMBOTSLOPSESTET FF
                                                    5.10%
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APPLICANT: PROCTER, ANNIE M.
APPLICANT: GREGORY, JOHN
APPLICANT: MILLAR, DAVID S.
ITILE OF INVENTION: METHOD FOR DETECTING GROWTH HORMSNE VARIATIONS IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence: Lesignated is US-09-280-630-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     57.8%; Score 461; DB 9; Length 245; 70.3%; Pred. No. 5.46-43; tive 7; Mismatches 20; Indels 16;
  57.8%; Shore 461; DB htt Theath 217;
70.8%; Pred. No. 4.6h-43;
                                               3.4 el.n.;
                                               7; Mismatches
                                                                                                                                                                                                                                                                                                              146 GIQTLMGRLEDG---SPRGGQIFKC 167
                                                                                                                                                                                                                                                                           112 ALYLVCG -- ERGFFYTPKTRGIVEC 134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/09853638
Patent No. US20020081505A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Ver. 2.0
SEC ID NO 66
LENGTH: 245
Query Match
Best Local Similarity 70.34
Matches 102: Conservative
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Bost Local Similarity 70.31
Matches 102; Conservative
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US-09-853-588-2
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APPLICANT: HEGSTON, LOU, L.
APPLICANT: HAWLEY, Stepher
APPLICANT: GINN, Cacqueline, M.
ARENERAL FILE OF INVENTION: AGENTS ACROSS CELULAR BARRIERS
FILE REFERENCE: 057220-0303
CURRENT FILING DATE: 2002-12-10
PRIOR PILING DATE: 2002-11-14
PRIOR PILING DATE: 2006-11-13
FRIOR PILING DATE: 2006-11-13
FRIOR PILING DATE: 2006-11-13
FRIOR FILING DATE: 2006-11-13
FRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
PRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
PRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
PRIOR APPLICATION NUMBER: US 60/237,929
FRIOR FILING DATE: 2000-11-00
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 PSNREETQQKSNLELLRISLLLIQSWLEPVQLGTGPRFVNGHLCGS------HLVE 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 57.1%; Score 455; DB 9; Length 217; Best Local Similarity 69.7%; Pred. No. 2.1e-42; Matches 101; Conservative 7; Mismatches 21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Indels
TILLE PRISERVE: WOMANS, THE VARIATIONS AND THEIR USES FILE PRISERVE: WOMANS (CURRENT APPLICATION KINBER: US/19/853,688 CURRENT APPLICATION FORES: US/19/853,688 WINBER OF SED ID NOS: 66 SOFTWARE OF SED ID NOS: 67 SOFTWARE PATELLY VEY: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57.1%; Score 455; DB 12;
69.7%; Pred. No. 2.1e-42;
tive 7; Mismatches 21;
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APPLICANT: COOPER, DAVID N.
APPLICANT: COOPER, DAVID N.
APPLICANT: COOPER, DAVID N.
APPLICANT: GRECORY, JOHN
APPLICANT: MILLAR, DAVID S.
TITLE OF INVENTION: METHOD FOW DETECTING GROWTH HORMONE VARIATIONS IN
TITLE OF INVENTION: HUMANS, THE VARIATIONS AND THEIR USES
TITLE OF INVENTION: HUMANS, THE VARIATIONS AND THEIR USES
CURRENT APPLICATION NUMBER: US/09/853,638
CURRENT PILING DATE: 2001-05-14
SOFIWARE: PARENTIN VOR: 66
SOFIWARE: PARENTIN VOR: 2.1
                                                                                                                                                                                                                                                                                                 Sequence 16, Application US/39E04459A
Patent No. US2025155100A1
GENERAL INFORMATION
APPLICANT: KIEFER, TIMOTHY J.
APPLICANT: CHEGNG, ANTHONY T.
TITLE OF INVENTION: COMPOSITIONS AND METHOES FOR RESULATED PROTEIN
ITLE OF INVENTION: COMPOSITIONS AND METHOES FOR RESULATED PROTEIN
FILE REFERENCE: 029996/C27 8721
CURRENT APPLICATION NUMBER: US/59/804,409A
CURRENT FILING DATE: 2001-03-12
NUMBER OF SEC IO NOS: 18
SOFTWARE: PATENTIN VEI. 2.1
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69.7%; Pred. No. 2.86-42;
tive 7; Nismatches 21; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 56.2%; Score 448; DB 9; Length 217; Best Local Similarity 69.0%; Prod. No. 1.3c-41; Matches 100; Conservative 7; Mismatches 22; Indeis ...
112 ALYLVGG -- ERGFFYTPKIRGIVEQ 134
                                                      146 GIQTLMGRLBDG---SPRIGQIFKQ 167
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Patent No. US20020681605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 69,79
Matches 101, Conservative
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US-09-853-688-4
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LENGTH: 217
TYPE: PRT
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TYPE: PRI
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US-09-853-688-4
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OM protein - protein search, using swinodel

September 16, 2007, 12:36:15 : Search time 17.5097 Servicts (Willion, alloaments) 825:845 Million cell updates/Serv Run on:

US-09-423-100-7 797 1 MPPIPLSRLEDNAMLRAHR.....IVEUGGISLOSINGLENYON 150 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 / Gapoxt 0.5

283308 Total number of hits satisfying chosen parameters:

283308 segs, 96158682 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 130% Maximum Match 130% Listing first 45 summaries

Database :

PIR\_76:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Pred. No. is the number of results predicted by chance to Lave a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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SUMMARIES	ŢŪ	. Ξ	167410	STHUV	STHUV2	167409	:6741.	157408	153267	LCHUC	E32435	A26449	B49159	PN0140	STHC	STMS	STRT	849483	JK0219	STPG	I46:45	304632	A37782	A61584	530429	STRO	STSH	STGI	S32682	JC1514
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# ALIGNMENTS

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Nialternate names: growth hormone ("Species: Macaca mulatta ("Ricsus macagus)" ("Species: Macaca mulatta ("Ricsus macagus)" ("Species: Macaca mulatta ("Ricsus macagus)" ("Acacassion: 167426" asoboya ("Acacassion: 167426" asoboya ("Asoboya "A") ("Anning, M.: Fisher, J.M.: Fowler, P.D. Endorrinology 133, 1744-1752, 1993 and "A") ("Asoboya "A") ("A") ("A"
              oţ
    G:Comment: The gene for this hormone is transcribed only in somatotrophic cells G:Comment: About 90\% of somatotropin is the 22K long form.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
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                                                                                                                                                                                                                                       A Map position: 17q23.1-17q23.3

A Introns: 4/1; 57/3; 97/3; 152/3

A Suberidamily: prolaction

C; Superidamily: prolaction

C; Seywords: alternative splicing, hormone; pituitary

F; 1-26/Domain: signal sequence *status predicted <SIG>

F; 27-217/Product: somatotropin 1, long form *status experimental <SOL>

F; 27-57,73-217/Product: somatotropin 1, short form *status experimental <SOS>

F; 79-191,208-215/Disuifide bonds: *status experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27 FPIIPLSRLEDNAMLKAHRLHGLAFDTYGEFEFAYIPKEGKYSFLONPGTSLCFSESTPT
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A:Molecule type: mkNa
A:Molecule type: mkNa
A:Residuati 1.77 <RES.2
A:Cross-reterences: GB:L16556; NID:q293114; PIDN:AAA18842.1; PID:q293115
B:Li, C.H.; Chang, D.; Lahm, H.W.; Stali, S.
Arch. Biochem. Biophys. 245, 287-291, 1986
A:Title: The primary structure of monkey pituitary growth hormone.
A:Reference number: A05094; MUID:86129460; PMID:3080959
A:Accession: A05694
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A:Residues: 27-99, 0',10:-178,'D',180-217 <LIC>
A:Note: the monkey species is not identified in the reference
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Accordents: amoutation: identification of source organism cisuportamily: prolactin
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Pred, No. 7.5e-38;
7; Mismatches 20:
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                                                                                                                                                   A)Gene: GDB:GH1
A)Cross-references: GDB:119982; OMIM:139250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  112 ALYLVCG--ERGFFYTPKTRGIVED 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     146 GIQTLMGRIRDG --- SPRTGQIFKQ 167
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A Residues: 27-34, 17, 36-47 <8085
R. de Vos, A.M.: Ultsch, M.: Kosslakoff, A.A.
R. de Vos, A.M.: Ultsch, M.: Kosslakoff, A.A.
Science 255, 306-312, 1992
A.Title: Human growth hormone and extracellular domain of its poceptor: crystal structure comber: A4728; MCID-92196577; PMID:1549776
A.Reference number: A4728; MCID-92196577; PMID:1549776
A.Rochents: annotation: X-ray crystallography, 2.8 angstress
A.Note: the structure of the complex with growth lormone receptor is Joseffibed
B.Gray, G.L.; Baldridge, J.S.; McKeown, K.S.; Heyneker, H.L.; Chang, C.N.
B.Gray, G.L.; Baldridge, J.S.; McKeown, K.S.; Heyneker, H.L.; Chang, C.N.
A.Title: Periplasmic production of correctly processed human growth hormone in Eschericity A.Reference number: 141126; MCID:8613793; PMID:8912261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in production and Carcinogenesis, Proc. Fourth Tensus Workshop Prolactio, Griffitus, R., A.Title: The chemistry of the human lactogenic horrows.

A.Feference number: A44.27

A.Contents: annotation: sometotrosis revision

R.Bewley, T.A.; Dixon, J.S.; Li, C.B.

A.Feference remparison of human piturisary arowib hormone, burne eropion, scenaroms

A.Feference number: A91764; Mills: 38942028; PMID: 4475434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        evolution
                                                                                   Agrice New Biol, 230, 90-91, 1971.
A) Title: Revised primary structure for human growth hormone.
A) Reference number: A93397; MUD:71139765; PRID:5279346
A) Accession: A93397; MUD:71139765; PRID:5279346
A) Molecule type: protein
A) Residues: 27-51 < NIA>
B) Noise, 17-51 < NIA>
B) Robins (17.7.) Greenwood, F.C.
B) Proc. Natl. Acad. Sci. U.S.A. 68, 866-869, 1971
A) Ritle: Sequences of pituliary and placental lactoconin and growth hormones: A) Reference number: A93778; MUD:71153968; PMID:5279528
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A:Molecule type: mRNA
A:Residues: 1-26 <RES>
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A,Molecule type: prote:D
A,Residues: 119-120/157-159 <NIZ>
A; Residues: 27.94;96-217 <LIC> R; Niall, H.D.
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Chorionic somatonammotropin-3 - rhesus macaque Cispecies: Macaca mulatia (rhesus macaque Cispecies: Macaca mulatia (rhesus macaque) cionatic: 13-May-1996 Fisequenco_revision 31-May-1996 Fitext_change 16-Jui-1999 Ciscression: 164409 Fisequenco_revision 31-May-1996 Fitext_change 16-Jui-1999 Kiccios, 7.6.: Durning, M.: Fisher, J.M.; Fowler, P.D. Endocrinciogy 133, 1744-1752, 1997 M.; Fisher, Discretion of four growth hormone/chorionic somatomammotropin-related complement Aircicrence number: 153267; MJID:94008724; PMID:8404617
                                                                                                                                                                                                                                                                                                                         Charcession: A28072
Reidouke, N.E.; Ray, J.; Emery, J.G.; Liebhaber, S.A.
J. Biol. Chem. 263, 9001-9006, 1989
Antile: Two distinct species of buman growth hormone-variant mRNA in the human pla
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                                                                                                                                                                                                                                                              U.Species: Homo sapiens (man)
U.Bate: 31.8ap-1989 #sequenco_revision 10.Feb-1995 #text_change 02.8ap-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFBEAYIPKEQKYSFLQNPQTSLSFSESIPT
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                                    sematotropin 2 precussor, splice form 2 - human
NiAlterrate nemes: growth hormone variant-2; placental somatotropin form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88 SNREETQOKSNLELZRISLZIOSWLEPVQL-LGSVFANNLYYGTSESDAYDLI 140
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      ---GIGPRFVNOHL 104
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C:Keywords: alternative splicing; hormone; placenta
F:1-26/Domain: signal sequence *status predicted <SIG>
F:27-256/Product: sematotropin 2 splice form 2 *status predicted <MAI>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A.Accession: A28072
A.McLecule :ype: mRNA
A.Residues: 1-256 <COO>
A.Note: an alternative splice junction for intron 4 is used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53.5%; Score 426.5; DB 1; ilarity 78.1%; Pred. No. 2.2e-34; Conservative 4; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cucry March 51.1%; Score 407.5; DB 2; Hest Local Similarity 71.9%; Pred. No. 1.4e-32; Matches 82; Conservative 12; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 PSNREETQCKSNLELLRISLLIQSWLEPVQL-----
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A:Molecule type: #RNA
A:Res:dues: 1-217 <RES>
      62 PSNREETQOKSNLELLRISLLLIQSWLEPVQL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Argene: GDB:GH2
Artross-references: GDB:119963; OMIM:139240
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A:Introns: 4/1: 57/3: 97/3: 152/3
C:Superfamily: prolactin
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hes 89; Conserv
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Matches
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1 Similarity 78.1%; Pred. No. 1.8e-34;
89; Conservative 4; Miemarah-1
PSNREETQQKSNLELLRISLLLTQSWLSEVQ 117
                                                                                                                                                   somatotropin 2 precursor
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Best Local Similarity
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Exatterrate names: choricals sometomamotropic 1; placental lactogen

Disperse: Homo sapiens (man)

Oliste: 23-66-1981 esequence_revision 23-001-1982 tetex_change 08-06-2000

Oliste: 23-66-1981 esequence_revision 23-001-1982 tetex_change 08-06-2000

Dispersion: C32455. A34422, T52342, A98333. A33199. A90054; A94427, A94427, B5229;

Echen, E.Y.: Liao, Y.C.: Smith, D.H.: Barrera-Saldana, H.A.: Gelinas, R.E.: Seeburg denomics 4, 479-497, 1989

Arritle: The human growth hormone locus: nucleotide sequence, biology, and evolution Areference number: A32435: MUID:89307277; PMID:2744760
A:Reference number: 153267; MUID:94008724; PMID:8404617
A:Accession: 553267
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A:Rosdidos: 1-217 COURS
A:Cross-retorences: GB:C03C71; NID:g183148; PIDN:ANA52551.1; PID:g183151
R:Goodman; H:M.; DeNoto, F:; Fiddes: J.C.; Hallewell, R:A:; Page, G.S.; Smith, S.; T
In Mobilization and Reassembly of Genetic Information, Scott, W.A.; Werner, R., Jose
A:Reference number: A94422
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A:Status: translated from GB/FMBL/DDBJ
A:Solecule type: mRNA
A:Residues: 1-3 <TAN>
A:Cross-references: GB:M35419; NID:q506822
A:Cross-references: GB:M35419; NID:q506822
A:Cross-references: GB:M35419; NID:q506822
A:Title: Primary structure of the NH-2-terminal extra piece of the precursor to hum?
A:Reference number: A93833; MUID:80034970; PMID:291043
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A:Reference number: A93192; MUID:78071761; PMID:593368
A:Accession: A93192
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A:Residues: 1-217-000>
A:Residues: 1-217-000>
A:Itanaku K.: Masuda, N.: Watahiki, M.; Yamakawa, M.: Shimizu, K.; Nagai, J.; Nakas}
Biochem. Int. 16, 287-292, 1988
A:Title: O'NA cloning of human chorionic somatomammotropin-1 mkNA whose transcriptic
A:Reference number: 152342: MUID:88209096; PMID:2835050
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A:Molecule type: mRNA
A:Molades: 1-217 <RES-
A:Cross-references: GB:215552; NID:g293108; PIDN:AAA18839.1; P1D:g293109
C:S:perfamily: prolactin
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A:Residues: 1,3-26 <SHE>
A:Experimental Source: placenta
A:Experimental P.H.; Martial, J.A.; Baxter, J.D.; Goodman, H.M.
R:Shine, J.; Seeburg, P.H.; Martial, J.A.; Baxter, J.D.; Goodman, H.M.
Nature 270, 494-499, 1977
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R:Li, C:W.: Dixon, J.S.; Chung, D.
Arct. Biochem. Biophys. 155, 95-110, 1973
A.Title: Amino ació sequence of human chorionic somatomammotropin.
A:Exference number: A90054: MUID:73201971; PMID:4712450
A:Accession: A90054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 217
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Best Local Similarity
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A:Residues: 50-217 <SHI>
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R. Golos, T. G., Durning, M., Fisher, J.M.; Fowier, P.D.

Endocrinology 133, 1744-1752, 1993

A.Title: Cloning of four growth hormone/chorionic somatomammotropin-related complementary

A. Reference numbor: 153267; MJID:94008724; PMID:8464617

A. Accession: 167411

A. Status: preliminary: translated from GB/EMB://DD8J

A. Molecule type: mRNA

A. Residues: 1-217 < RES

A. Cross-references: GB:116555; NID:q293116; FIDN:AAA20186.1: FID:q293117
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Endocrinology 13, 1744-1752, 1993
Arfitle: Cloning of Four growt: hormone/chorionic sematemasmotropin-related complementar
A:Reference number: 153267: MUID:94068724; PMID:8404617
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CiSpecies: Macaca mulatta (rhesus macaque)
CiDacte: 31-May-1996 #sequence_revision 31-May-1999 #rwxt_change [6-Ju]-1999
CiAccession: 153267 | Regulation of the sequence_revision of the sequence of the sequen
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C;Date: 31-May-1996 #sequence_revision 31-May-1996 #text_change 16-Jul-1359
C;Accession: 167408
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A;Residuos: 1-72 <RES>
A;Cross references: OBLLL6553: NID:9293110: PIDN:AAA18843.1: PID:9293111
C;Superfamily: prolactio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 50.8%; Score 405; EB 2; Length 217; Best Local Similarity 67.7%; Pred. No. 2.4e-32; Matches 86; Conservative 9; Mismatches 18; Indels
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82.2%; Pred. No. 1.8e-31;
Live 11; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chorichic sematemammetropin:2 - rhesus madaque (fragment)
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                                                                                                                                                                                                        N;Alternate names: growth hormone
C;Species: Macaca mulatta (thesus macaque)
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Best Local Similarity 82.2%
Matches 74; Conservative
                                                                                                                                                                       somatotropin - rhesus macaque
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Cispocies: Nord Sapiens (Nan)
Cispocies: Nord Sapiens (Nan)
Cispocies: 29-Doc-1989 *sequence_revision 29-Dec-1989 *text_change 16-Jul-1999
Cispocies: 29-Doc-1989 *sequence_revision 29-Dec-1989 *text_change 16-Jul-1999
Sichen, E.Y. Jaco, Y.C., Smith, D.H., Narrera-Saldana, H.A.: Gelinas, R.E.: Seebur Genomics 4, 479-497, 1989
A.Title: The human growth hormone locus: nucleotide sequence, biology, and evolutio A.Reference number: A32435 MUID:89307277; PMID:274476
A.Accession: E32435
A.Status: preliminary
A.Molecule type: DAS
A.Status: preliminary
A.Molecule type: DAS
A.Status: Company A.Molecule type: DAS
A.Status: Das A.Status Das A.Sta
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C.Daces: 30-Jun-1988 *sequence_revision 30-Jun-1988 *text_change 28-Jul-1995
C.Dacesslon: A26449
F.Hitt, H.; Kimelman, J.; Birnbaum, M.J.; Chen, E.Y.; Seeburg, P.H.; Eberhardt, N.L.
INNA A. Sq-70, 2947
A.Title: The human growth hormone gene locus: structure, evolution, and allelic var
A.Tkile: The human growth hormone gene locus: structure, evolution, and allelic var
A.Reference number: A26449; MUID:87161235; PMID:303680
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A:Molecule type: DNA
A:Molecule type: DNA
A:Molecule type: DNA
A:Mosidue: 1-155 <HTR>
C:Siperfamily: prolactin
F:1-26/20maln: signal sequence *status predicted <SIG>
F:27-215/Product: choriomammotropin, hGS-3 allele *status predicted <MAT>
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Pred. No. 5.4e-30;
8; Mismatches 8
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82.08;
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Best Local Similarity 82.0 Matches 73; Conservative
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C:Superfamily: prolactin
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Thes 70; Conserva
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A,Residues: 27-277 <NIA-A
B,Residues: 27-277 <NIA-A
B,Residues: 27-277 <NIA-A
B,Residues: 27-277 <NIA-A
B,Residues: 26-277 <NIA-A
B,Residues: 26-277 <NIA-A
B,Residues: 26-277 <NIA-A
B,Reference number: 401283; MUID:91244006; PMID:2037146
A,Reference number: A01283; MUID:91244006; PMID:2037146
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Asture New Biol. 233, 59-61, 1911
A;Title: Amino-acid sequence of 'uman placental lactocen.
A;Reference number: A93401; MUID:72016313; PMID:5286363
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Ej1-26/Domain: signal sequence Estatus experimental «SIG»
Ej1-27/Domain: chorionammotropin A Estatus experimental
Ej2-19/70isulfide bonds: Estatus experimental
Fj208-215/Disulfide bonds: interchain (to 215 in dimeric form) Estatus experimental
Fj208/Disulfide bonds: interchain (to 208 in dimeric form) Estatus experimental
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A/Status: translated from GB/EMBL/DDBJ
A/Status: translated from GB/EMBL/DDBJ
A/Rolecule: type: rRNA
A/Rosious: 160-217 <RE2>
A/Cross-references: GB:MZ5118/: N.D:9181124; PIIN:AAA357211; P1D:9181125
C/Genetics:
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                                                                                                                                                                                                              in Prolactin and Carcinodonesis, Picc. Fourth Tenerus Wo A;Title: The chemistry of the human Tactodonin burdons. A;Reference number: A94427
A;Reference number: A94427
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A)Cross-references: GDB:119084; OMIK:155200
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A,Introns: 4/1; 57/3; 97/3; 52/4
C,Superfamily: prolactin
                                                                                                                A,Experimental source: placenta R;Niall, H.D.
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Matches 73; Conservat
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A; Residues: 27-46 <NIC>
A; Molecule type: protein
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A; Residues: 1-217 <RES>
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somatotropin - golden hamster

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E.Zakin, M.M.: Poskus, E.; Deliacha, J.M.; Paladini, A.C.; Santome, J.A.
FEBS Lett. 25, 77-82, 1972
A.Titic: Amino acid sequences around the cystine residues in equine growth hormone.
A:Reference number: A31383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RICHIVER, E.: Bartree, A.S.
Brochen. J. 199, 19-24, 1968
ArTitle: Anino acid sequences around the cystine residues in horse growth hormone.
ArReference number: A90240; KUID:68368350; PMID:4876100
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A:Moleculo type: protein
A:Mesidiues: 1-190 <2AK>
A:Mesidiues: 1-190 <2AK>
A:Wasidiues: 1-190 <2AK>
E:BS M. M. M. Poskus: E:: Deliacha, J.M.; Paladini, A.C.; Santome, J.A.
E:BS Lact. 34, 353-355, 1973
A:Title: The amino acid sequence of equine growth hormone.
A:Reference number: A91395; MUID:74020362; PMID:4747849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A:Molecule type: protein
A:Residues: 176-190 (OLI>
0:Moper[ansily: prolactin
0:Reywords: hormone: picuitary
F:52-163,180-188/Disulfide bonds: *status experimental
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Hest_Local_Similarity 65.2%; Pred. No. 9.70-23;
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A:Molecule type: protein
A:Residues: 42-69:157-190 <2A3>
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Matches 59; Conservative
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                        C;Species: Mesocricetus auratus (golden hamster)
C;Sate: 19-Dec-1993 resequence_revision 18-Nov-1994 rtcxt_change 21-Jui-2000
C;Accession B49159
R;Southard, J.N.; Sanchez-Jimenez, F.; Campboll, G.T.; Talamantus, F.
Endocrinology 129, 2955-2971, 1991
B,Title: Sequence and expression of hamster projactin and arcwth hormone messenger PNAs. A;Reference number: A49159; MUID:32063850; PMID:1954881
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C;Species: Equus caballus (domestic horse)
C;Species: Equus caballus (domestic horse)
C;Date: 13-Jul: 1981 *sequence_revision 13-Jul-1981 *text_change 2x-Aug-1996
C;Accession: A9:772; A9:1995; A9:1995; A9:1981 *text_change J.Aug-1996
R;Zakin, M.M.: Poskus, E. Landron, A.A. Bergara, P.; Suttome, J.Aug-1996, J.M.: J. Pept. Protein Rcs. 6: 435-444, 1976
A;Title: Primary structure of equine growth hormone.
A;Reference number: A9:1772: MCID:77005410; PMID:96815;
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C;Species: Balachoptera borealis (sel whale)
C;Date: 07-May-1993 #sequence_revision 07-Kay-1993 #text_change 07-May-1999
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A,Molecule type: mRNA
A;Residues: 1-216 <SCGA-A;Residues: 1-216 <SCGA-A;Cross-references: GB:S66299; NID:g239355: PIDN:AAB20368.1; PID:g239355-A;Cross-references: GB:S66299; NID:g239355-A;NOte: Snquence extracted from NCBI backbone (NCBIN:66299; NCBIP:66300)
C;Supertamily: prolactin
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67.0%; Pred. No. 4.60-23;
artive 13; Mismatches 16; Indels 1
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R:Yudeev, N.A.; Pankov, Y.A.; Bilatov, A.A.; Csipova, T.A.
Bibhhmia 47, 2055-1069, 1982
A:Title: Amino acid sequence of sciwhale schatctropin.
A:Reference number: PNO140; MUID:83000559; PMID:7115913
A:Accession: PNO140
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67.0%; Pred: No. 7.7e-23;
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C,Keywords: growth factor; hormone
F,52-163,160-188/Disulfide bonds: #status predicted
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A;Residues: 1-190 <YUD>
A;Note: article io Russian with English abstract
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   N;Alternate names: growth hormone
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Best Local Similarity 67.0%
Matches 61: Conservative
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Best Local Similarity 67.cm
Those 61, Conservative
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61

Length 190; Indels

177 DB 1;

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Noticernate names: growt, mornine
C.Species: Mus musculus (house mouse)
C.Species: Musculus (house)
C.Species: M
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Total number of hits satisfying thosen parameters: 127863 seqs, 47026705 residues

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### ALIGNMENTS

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SQMA_HUMAN STANDARD; QHBZ1; Q17 AA.
F0124: O4405; O16631; Q9HBZ1; Q9UMJ7; Q9UNL5:
21-UG:-1986 (Fel. 0.: Treated)
O1-MAK-1992 (Rel. 2.: Last sequence update)
15-SEP-2003 (Rel. 42. Last annotation update)
25-SEP-2003 (Rel. 42. Last annotation update)
hormone) (Growth hormone) (GH) (GH-N) (Pituliary growth hormone) (GHO, Growth hormone) (A
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MINILINE-79603293; PubMed-37496;
Martial J.A., Hallewell R.A., Baxter J.D., Goodman H.M.;
"Himan growth hormones! complementary DNA cloning and expression in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The human growth hormone locus: nucleotide sequence, biology, and
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                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Buteleostomi:
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
NCBL_TaxID=9606;
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TISSUE-Pituitary:
G1 J., Huang Q.-H., £i. N., Xu S.-H., Han Z.-G., Fr. G., Chen Z.;
A nove; qene expressed in human pituitary.";
Submitted (SEP-1399) to the EMBL/GenBank/DDBJ databases.
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"Human growth hormone DNA sequence and mRNA structure: possible
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WEDLINSE-69307277; PubMed=2744760;
Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
Gellnas R.E., Seeburg P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9:3719-3730(1981).
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Seebirg P.H.;
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SECJENCE FROM N.A. (ISOFORM 1).
MEDLINE-80034477; PubMed=386281;
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Nucleic Acids Res. 9:33
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SCMA_HUMAN
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                                                                                                                                          Biol. Chem. 256:11645-11650(1981).
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                                                                        DEAMIDATION OF GIN-163 AND ASN-178
                                                                                                                                                                        REVIEW.
MEDLINE-99321812; PubMed*10393484;
                                                                                                                                                                                                                                                    3D-STRUCTURE MODELING.
MEDLINE-88190673: PubMed=3447173;
Cohen F.E., Kuntz I.D.;
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                                amino acid deletions.
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    TISSUE-Fituitary:
MEDLINE-2040257; PubMed-10431946;
Hu R.-M., Han Z.-G., Song H.-D., Peng Y.-P., Huang Q.-H., Ren S.-X.,
Hu R.-M., Han Z.-G., Song H.-D., Peng Y.-P., Fush Q. Shang O.-H.,
Gu W.-J., Brang C.-H., Li Y.-B., Jiang C.-L., Fu S., Zhang O.-H.,
Gu B.-W., Dai M., Mao Y.-F., Gao G.-F., Rong R., Ye M., Zhou Z.,
Xu S.-H., Gu J., Shi J.-X., Jin M.-R., Zhang C.-K., Wi T.-M.,
Huang G.-Y., Chen M.-D., Chen M.-D., Chen J.-L.,
"Gene expression profiling in the human hypothalamus-pituitary-adrenal
axis and inil-longith cDNA cloning.":
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Niall H.D., Hogan M.L., Sauer R., Rosenblum I.Y., Greenwood F.C.;
"Sequences of pitulitary and placental lactogenic and growth horrones:
evolution from a primodal peptide by gene reduplication.";
Proc. Natl. Acad. Sci. J.S.F., 69:866-669(1971).
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"Human pituitary growth hornone, 32. The primary structure of the
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"Periplasmic production of correctly processed human drowth Perebrichla coll: natural and bacterial signal sequences are
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J. Biol. Chem. 256:2395-2401(1981).
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"The chemistry of the human lactogenic hormones.";
(In) Griffiths K. (eds.);
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                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 27-217, AND REVISIONS.
                                                                                                                                                                                                                                                                                                          MEDLINE-69289202; Pubmed-5810834;
Li C.H., Dixon J.S., Liu W. K.,
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MEDLINE-71139765, PubMed-5279046;
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MEDLINE=80130196: PubMed=7356479:
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                SEQUENCE FROM N.A. (ISCFORM 4).
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Gene 39:247-254(1985).
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FUNCTION: Plays an important role in growth control. Its major role in stimulation body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates receptor complex."; \*Characterization of single-nucleotide polymorphisms in coding regions MEDLINE-\$99318093; PubMed-10391209; Cargill M., Altshuler D., Ircland J., Sklar P., Ardlic K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Zlaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q., Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O., MEDLINE-82052997; PubMed-7028740; Lewis U.J., Singh R.N., Bonewald L.F., Seavey B.K.; Mitered proteolytic cleavage of human growth hormone as a result of Norstedt G.; Norstedt G.; Norstedt G.; Norstedt G.; Crystal structure of an antagonist mutant of human growth hormone, G.20K, in complex with its receptor at 2.9-A resolution."; J. Biol. Chem. 271:32197-32203(1996). MEDLINE-57113023; PubMed-8943276; Sundstroem M., Lundqvist T., Roedin J., Glebel L.B., Milligan D., MEDLINE-92196577; PubMed-1549776; "A de Vos A.M., Ultsch M., Kossiakoti A.M.; "Human growth hormone and extracellular domain of its receptor: crystal structure of the complex."; Baumann G.: "Growth hoterogeneity in human pituitary and plasma."; Horm. Res. 51 Suppl. 1:2-6(1999). Prediction of the three-dimensional structure of human growth Navaza J. "The crystal structure of wild-type growth-hormone at 2.5-A resolution."; X-RAX CRYSTALLOGRAPHY (2.9 ANGSTROMS). MEDILINE-95075462: PubMed-798444. Somers W., Ullsel W., de Vos A.M., Kosslakoff A.A.: "The X-ray structure of a growth hormode-prolactin r Rature 372:476-481(1994). |22|
X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
CHantalat L., Chirqadzo N.Y., Jones N., Korber F.,
Pavlovsk A.G., Wlodawer A.;
Pavlovsk A.G., wlodawer A.;

112 ALYLVCG - - FRGFFYTPKTRGIVEQ 134

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28-F5B-1003 (Rel. 41, Last. annotation update)
Somatotropin precursor (Growth hormone) (GH) (GH-N) (Pituliary growth
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Prod. No. 4.66-58:
7: Mismatches 20
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InterPro; IPR601460; Somatouropin.
Pfam: FF00103; hormone: 1.
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    57, 8%;
70, 3%;
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    Ouery Match
Best Local Similarity 70.3
Matches 192: Conservative
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                                                                                                                                                                                                                                                                                                                              Somatotropin precursor (Growth hormone) (GH) (GH-N) (Pituitary growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Golos T.G., Durning M., Fisher J.M., Fowler P.D.; "closing of four growth hormone/chorionic somacomammotropin-related complementary deoxyribonucleic acids differentially expressed during pregrancy in the risesus anoney placenta."; Endocrinology 133:1744-1752(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIME=66129466, PubMed=3080959,
Li Chung D., Lahm H.W., Stein S.;
The primary structure of monkey pituitary growth hormone.";
Arch. Bioccem. Biophys. 245:287-291(1986).
-!- FUNCTION: Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and cher tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulate among amino acid uptake and proliferation of myoblasts. It also stimulate and other
                                                                                                                                                                                                                                                                                                                                                                                                                          Macaca mulatta (Rhesus macaque).
Eukaryota, Metazca, Chordata, Craniata, Vertobrata, Euteleostomi,
Mammalia, Futheria, Primates, Catarhini, Cercopithecidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SIBCELLUIAR LOCATION: Secreted.
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BY SIMILARITY.

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E -> Q (IN REF. 2).

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W; 2C5180341EFC46D0 CRC64;
                                                                                                                                                                                                                                                             -1994 (Rel. 30, Last sequence update)
3-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                    217 AA
146 GIQTLMGRLEDG---SPRTGQIFKQ 167
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PROSITE: PS00388; SOMATOFROIN.: 1.
PROSITE: PS00338; SOMATOFROIN.2: 1.
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RSSP: PG1241; 1AXI.
InterPro: IPRG01450; Somatotropin.
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                                                                                                                                                                                                                              01-0CT-1993 (Rel. 27, Created)
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                                                                                                                                                                    SOMA_MACMU P33093;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bloinformatics and the ERH constation the European Bloinformatics Institute. There are no restrictions of its use by non-profit institutions as long as its content is in to any modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.lsb-sib.ch/announce/
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27 FPTIPLSKLFONAMLKAHKLHQLAFÖTYQEFEBAYIFKEGKYSFLÇNPÇTSIJFSESIPT 36
                                                                                                                                                                                2 FPT1PLSRLFDNAMLRAHRLHGLAFOTYOEFEEAYIPKEQKYSFLONPGTSLSFSESIFF #1
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Bukaryota: Matazoa: Chordata; Cranlala, Vertebrata: Burelessioni;
Mammalia: Buthoria; Primatos: Platyrrhini: Cebilae: Cabinae: Sairiri
NCBI_TaxID-39432:
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SUBCELLULAR LOCATION: Serreted.
SIMILARITY: BELONGS TO THE SOMATCTROPIN/PROLATIN FAMILY.
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57.7%; Score 460; CB 1;
98.9%; Pred. No. 5.8e-38;
Live 0; Mismatches 1;
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28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rei. 41, Last annotation ipdate)
Somatotropin precursor (Growth hormone).
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PROSITE: PSG0266; SOMATCIROPIN_1; 1.
PROSITE; PSG0338; SOMATCIROPIN_2: 1.
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InterPro; IPR031400; Somatotropin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27 FPTIPLSRLFDNAMLRAHRLYQLAYDTYQEFEEAYILKEQKYSFLQNPQTSLCFSESIPT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 FPTIPLSRLFONAMLKAHRIHQLAFDTYQEFEEAYIPKEQKYSFLONPQTSLSFSESIPT 61
                                                                                                                                                                                                                                                                                                                                               Revol A., Esquivel D., Santiago D., Barrera-Saldana H.)
"independent duplication of the growth hormone gene in three
Anthropoidean lineages.";
Submitted (APR-20G1) to the EMBL/GenBank/DDBJ databases.
Submitted (APR-20G1) to the EMBL/GenBank/DDBJ databases.
Submitted (APR-20G1) to the EMBL/GenBank/DDBJ databases.

Force in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                           Growth hormone variant precursor (GH-V) (Placenta-specific growth hormone) (Growth hormone 2).
                                                                                                                                                                                                                                                            Eukaryofa; Metazoa; Chordatá; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Pan.
NCBI_TaxID=9598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -:- SUBCELLULAR LOCATION: Secreted.
-:- IISSUE SPECIFICITY: Expressed in the placenta.
-:- SINILARITY: RELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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BY SIMILARITY.
BY SIMILARITY.
1592A429075677DE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54.5%; Score 434.5; DB 1 78.9%; Pred. No. 1.8e-35;
ZB-FEB-2003 (Rel. 41, Created)
ZB-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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28-FEB-2003 (Rel. 41, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hormone, Placenta, Signal, Glycoprotein.
SiGNAL 1 26 BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plam: PF00103; hormone: 1. PROSITE; PS00266; SOMATOTROPIN_1; 1. PROSITE; PS00338; SOMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL: AF374233; AAL72285.1; -.
InterPro; IPR601400; Somatotropin.
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                                                                                                                                                                                                                                                 Pan troglodytes (Chimpanzee).
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                                                                                                       STANDARD:
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191
215
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Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                    SECUENCE FROM N.A.
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208
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                                                                                                      SOK2_PANTR
P58757;
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DISULFID
DISCLFID
                  87
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                                                                                         SOM2_PANTE
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Biol. Chem. 263:9001-9005(1988)
                                                                                                                                                                                                                                                                                                                                                        TISSUE-Placenta;
MEDLINE-22388257; PubMed=12477932;
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  MEDLINE-83182010; PubMed=7169009;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human and mouse cDNA sequences.
                                                                                                                                                                                                                                                                                                                    Genomics 4:479-497(1989).
                                                   DNA 1:239-249(1982)
                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                            evolution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baumann G.
                                                                                                                                       proteins
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   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bloinformatics and the EMBL clistation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-ssb.cc/announce/or send an email to licensellsb-sib.ch).
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"Cloning and consactation of a pitative growth hornces constitut
"Cloning and consectivation of a pitative growth hornces constitut
Submitted (AGG-2000) to the EMBL/Gendank/DBBJ databases.

-!-FUNCTION: Plays an important role in growth; courted. Its major
role in strainlating body growth is to strainlates holl from other tissues to secrete ide-it strainlates both the
differentiation and proliferation of myoblasts. It also stimulates
amino acid uptake and protein synthesis in mascle and other
tissues (By similarity).

-!- SURCELIGIAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 FPTIPLSRIEDNAMIRAHRISGIAFOIYOEFROAYIPKSGKYSFLQNEOTSISFSGSIFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27 FPTIPLSRILDNAMIRAHGHAFDIYQEFBBATIKROKYSFIONPOTSDFSESIPT
                                              Bukaryota, Metažoa, Chordata, Cranidta, Vertebrara, Eutelwastemi,
Marmalia, Butheria, Primates, Platyribick, Callifrichidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-FEB-2003 (Rol. 41, hast sequence update)
15-SSP-2003 (Rel. 42, Last emboration update)
Growth hormone variant precursor (GH-V) (Placenta-specific growth hormone) (Growth bormone 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleosteri; Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN PARTLY.
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BY SIMILARITY.
E162:51A12CE6192 CRC64:
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Pred. No. 3.20+35;
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62 PSNREETQQKSNLELLRISLLLIQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.7 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                BY SIMILARITY. SOMATOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
            Somatotropin predursor (Growth hormone) 6H1.
                                   Callithrix jacchus (Common marmoset).
                                                                                                                                                                                                                                                                                                                                                                                                   InterPro: IPR001400; Somatoiropin.
Pfam: PF00103; bornone; i.
PROSITE; PS00266; SOMATOTRO:IN_1: 1.
PROSITE; PS00318; SOMATOTRO:IN_2: 1.
HORMONE; Pitultary; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986 (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                             EMBL; AJ297563; CAC03481.1; ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24959 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54.2%:
91.2%:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                          P01241: 1A22
                                                                                                [1]
SEQUENCE FROM N.A.
                                                                                   NCBI_TaxID-9483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27
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A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
A Klausner R.D., Zeeberg B., Buetow K.H., Schaefer C.F., Bart N.K.,
A Hopkins R.P., Jordan B., Moore I., Wang J., Hsieh F.,
A Eitchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapteion M., Scares M.B., Bonaido M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Jsdin T.B., Toshlyuki S., Carninci P., Prange C.,
A Brownstein M.J., Jsdin T.B., Toshlyuki S., Carninci P., Prange C.,
A Brownstein M.J., Jsdin T.B., Toshlyuki S., Carninci P., Prange C.,
A Richards S., Mcyena P.J., McKernan K.J., Malek J.A., Guraratne P.H.,
A Kichards S., Worley K.C., Eale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Kichards S., Worley K.C., Eale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Kichards S., Worley M.C., Shedengren E.J., Lu X., Gibbs R.A.,
A Kithing M., Mcadan A., Young A.C., Shevchenko Y., Bouffard G.G.,
A Hiakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
A Hiakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
A Hitheffleid Y.S.N., Krzywinski M.T., Skalska U., Smallus D.E.,
A Schherch A., Schein J.E., Jones S.J.M., Marra M.A.,
Mutterfleid A.S.N., Krzywinski M.T., Skalska U., Smallus D.E.,
Mchertleid and Intlain analysks of More than 15,000 full-length
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SUBCELLULAR LOADION: Secreted.

ALTERNATIVE PRODUCTS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "The human growth hormone locus: nucleotide sequence, biology, and
                                                                                                                                                                                                                                MEDITNE-E8243769; PubMed-3379057;
Cooke N.E., Ray J., Emery C.G., Jebhabor S.A.; They distinct species of human growth bormone-variant mRNA in the human placenta predict the expression of novel growth hormone
"The Numan growth hormone gene family: nucleotide sequences show recent divergence and predict a new polypeptide hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORM 1).
MEDGINE-89024584: PibMed-2460050.
MEDGINE-SOlpow M.L., Frankonne F., Hennen G.;
"Cloning and nucleotide sequence of placental hGH-V cDNA.";
Arch. Int. Physiol. Biochim. 96:63-67(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE#89367277; PubMed-2744760;
Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A.,
Gelinas R.E., Sceburg P.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. J.S.A. 99:16899-16903(2002).
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Name-1; Synonyms-GH-V1;
Isoid-P01242-1; Sequence-Displayed;
                                                                                                                                                                                    SEĞUENCE FROM N.A. (ISOFORMS 1 AND 2).
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Cercopithecinae; Macaca.
                                                                                    SEQUENCE FROM N A.
                                       SECUENCE FROM N.A.
                NCBI_TaxID-9544;
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DISCLEID
CONFLICT
CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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                                                          This SWISS-PROT entry is copyright, it is produced through a collaboration between the SWISS fistitute of Bioinformatics and the EMHL ourstation the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this scatement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licensetisb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

N-LINED (SICHAC. . . ) (FOIBWITAL).

RLEDGSPRINGTFNOSYSKFOTKSHNODALLENNSHLINGER
KOMDKVETFLEIVOGSSVEGSCOF -> VBVARGTPHRGAP
LASRWGERHECPLESSQATTOENSPYSSFPLNNSHGISS.
POGSGGGKWNRREGREDCRSAMPELLFLHSFARSHGURGHEAA
DLOSVLQQV (1h 18010fm 2).

/FILG-VSP_DGGSG3.

R -> W (In dbsNP:S185).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 FPTIPLSRLFDNAMIRARRIYQLAYDTYQEFEEAYILKROKYSFLQNPQTSLCFSESIPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOM2_MACKU STANDARD, PRT; 217 AA.
Q07370; Q26454;
Q01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Growth hormone variant precursor (GH-V) (Planestar-specific growth)
hormone) (Growth hormone 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Macaca mulatta (Rhesus macaque).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleosiumi;
Mammalia, Eutheria, Primates, Catarrhini, Cercopithecidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                                                                                                                                                                                                  Clycoprotein; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53.5%: Score 426.5: DB 1: Length 217; (Barity 78.1%: Pred. No. 1.10.54: Conservative 4; Mismatches 10: Todole 11.
                        TISSUE SPECIFICITY: Expressed to the placenta.
SIMILARITY: BELONGS TO THE SOMATOTROFIN/PECLACTIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 -> T (IN REF. 2).
7893246988822896 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                     GROWTH HORMONE VARIANT
IsoId=P01242-2: Sequence=VSP_006203;
Note=No experimental confirmation available;
                                                                                                                                                                                                                                                               Genew, HGNC:4262: GH2.
MIM: 19240.
MO: GO:600518D: P:peptide hormone: TAS.
InterPro; FPR003400: Somatosropin.
                                                                                                                                                                                                                                                                                                         Pfam: PP00103; hormone: 1.
PROSITE: PS00266; SOMATCTROFIN_1: PROSITE: PS00318: SOMATCTROFIN_2: ...
                                                                                                                                                                                                              EMB5, BCC20760, AAH20760.1; -. PIR: A28072; STHUV2. PIR: D32435; STHUV2. HSSP: P01241; 1A22. Genew: HGNC:4262; GH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217 AA; 24999 MK;
                                                                                                                                                    EMBL; K00470; AAA98619.1; --
EMBL; J03756; AAB59547.1; --
EMBL; J03756; AAR359549.1; --
EMBL; M34451; AAA35897.1; --
EMBL; C03071; AAA52552.1; --
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217
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Local Sim...
89;
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SIGNAL
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DISCLEID
CARBOHYD
VARSPLIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
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This SW:SS-PROT entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                       Actions T.G., Durning M., Fisher J.M., Fowler P.D.;
Cloning of four growth hormone/chorionic somatomammotropin-related
complementary decoyribinoucleic acids differentially expressed during
pregnancy in the rhesus monkey placenta.";
Endocrinology 133:1744-1752(1993).
I. FUNCTION: Plays an important role in growth control. Its major
role in stimulating body growth is to stimulates both the
differentiation and proliferation of myoblasts. It also stimulates
amino acid uptake and protein synthesis in muscle and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 FPTIPLSRLFDNAMLRAHRIHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -:- SUBCELLUGAR LOCATION: Secreted (By similarity).
-:- TISSUE SPECIFICITY: Expressed in the placenta.
-:- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
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Golos T.G.;
Submitted (JAN-1994) to the EMBL/GenBank/DDBJ databases.
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E -> G (IN REF. 2).
8DB116CBC24EA090 CRC64;
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BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fram: PF00103: hormone; I
FRINTS: PR(00836; SOMATOTROFIN,
PROSITE: PS00266; SOMATOTROFIN, I: 1
PROSITE; PS00338; SCMATOTROFIN, I: 1.
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                                                                                                             IISSUE=Placenta;
MEDLINE=94008724; PubMed~8404617;
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P01243;
21-JUL-1986 (Rel. 01, Created)
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EMBL, 116555; AAA20196.1; -.
PIR, 167411; 167411.
HSSP; P01241; 1HGU.
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85; Conservative
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    ABJOREME FROM TAKE.

MEDLINE-22388257; PubMed-2477932;

A Strassberg R.J. Feligold S.A. Grouse L.B., Derree J.G.,

A Klausner R.D., Colluns F.S., Magner I., Schaefer C.F., Ebst R.K.,

A Altschul S.F., Zeeberg B., Bietow K.H., Schaefer C.F., Ebst R.K.,

A Altschul S.F., Zeeberg B., Bietow K.H., Schaefer C.F., Ebst R.K.,

A Altschul S.F., Zeeberg B., Bietow K.H., Schaefer C.F., Ebst R.K.,

A Diatochenko L., Marusina K. H., Moster T., Mar G., Biston F.,

Diatochenko L., Marusina K.B., Bohaldo M.F., Casaran T.I., Scheer I.,

A Brownstein M.J., Csdin T.B., Tookhyaki S., Candisci E., Prince C.,

A Brownstein M.J., Csdin T.B., Tookhyaki S., Candisci E., Prince C.B.,

A Brownstein M.J., McDang D.M., Scherman K.J., Miles C.A., Gindrand C.B.,

A Kichards S., Worley K.C., Hale S., Carcia A.N., Gindrando C.B.,

A Willalon D.K., Muzny D.M., Sodergren E.J., Hu, N., Ging B.A.,

A Hiting M., Madan A., Young A.C., Scheubenko V., Schiller B.A.

Bakeeley R.W., Touchman J.W., Scheen S.D., Dickern M.C.,

RA Butterfield V.S.N., Krzywinski M.I., Skalska J., Smailus D.B.,

Conceration and initial analysis of more than 15,000 full-length

F. human and mouse CDNA sequences P.,
                                                                                                                                                                                                                                          01-APR-1968 (Rel. 07, Dast sequence update)
15-88P-2003 (Rel. 42, Dast annotation update)
Lactogen precursor (Choriomenmotropin) (Chorionic secalemanguatopin).
CSH1 AND CSH2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. (GENES CSH1 AND CSH2).
MEDLINE-89307277; Pubmed-2744760:
Cher E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A., Gelinas R.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The human growth hormone locus: nucleotide sequence. 

 biclogy, and evolution.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDITNE-83160916; PubMed-6300056; Barrera-53160916; PubMed-6300056; Barrera-531dana E.A., Secburg P.E., Saunders G.F.; Two structurally different genes produce the same secreted human
                                                                                                              Būkaryota, Metazoa: Chordata: Ciuniata, Vertekrata, Eurelesstomi;
Mammalia: Eutheria: Primates: Catarrhini; Bomínidao: Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "The human growth hormone gone family: sucleotide sequences show recont divergence and predict a new polypoptide hormone."; DNA 1:239-246(1962).
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MEDLINE-78071761; PubMed-593368;
Shine J., Seeburg P.H., Mart.al J.A., Baxter J.D., Goodman H.M.;
                                                                                                                                                                                                                                                                                                                               SECUENCE FROM N.A. (GENE CSF2).
MEDLING-87161235: PubMed-3050680;
Hirt H., Kimelman J., Birnbeum M.J., Chen R.Y., Scoburg P.H.,
Eberhardt N.L., Barta A.;
"The human growth Acrmone gene locus: Structure, evolution, and
alielic variations.";
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Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               placental lactogen hormone.";
J. Biol. Chem. 258:3787-3793(1983).
                                                                                                                                                                                                 SEĞGENCE FROM N.A. (GENE CSH1).
MEDLINE~85030426: PUFMed*6208192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-83182010; PubMed-7159009;
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                                                                                         Homo saplens (Human)
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SEQUENCH FROM N.A.
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METALLINE PROJECTION OF THE NUMBER OF THE SCHOOL N.M.;

REA Schoolder A.R., Kowalski K., Russell J., Sherwood L.M.;

REA Schoolder A.R., Kowalski K., Russell J., Sherwood L.M.;

RI "facentification of the interchain disulfide bonds of dimeric human

WI DISCENDED SIMILAR FOR THE SCHOOL OF SCHOOL OF THE SCHOOL OF CO. -- SUBCELLULAR LOCATION: Secreted

-- FUNCTION: SIMILAR FOR THE SCHOOL OF CSHI IS SHOWN.

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"Construction and analysis of recombinant DNA for human chorionic semanomentopin.";
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MEDLIND=73201971: PubMcd-4712450;
51 C.H., Bixon J.S., Chung D., Chung D., Amino and sequence of huran chorionic somatomammotropin.":
Amino and sequence of huran chorionic somatomammotropin.":
Agen. Biochem. Biophys. 155:95-110(1973).
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Nature New Biol, 235:64-64(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-72016313; PubMed-5286363;
Sherwood Lim, Handworqer S., McLaurin W.D., Lanner M.,
Anino-edid sequence of human placental lactogen.";
Nature New Biol. 233:59-61(1971).
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P -> A (IN CSH2).
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IS -> L (IN CSH2).
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I -> T (IN REF. 9).
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PRCSITE; PS00266; SOMATOTROPIN_1; 1.
PROSITE: PS00338; SOMATOTROPIN_2; 1.
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PIR; C32435; LCHCC.
HSSP; PO1241: 1A22.
Genew: BGNC: 2440; CSH1.
Genew: HGNC: 2441; CSH2.
                                                                                                                                      Nature 270:494-499(1977).
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SEQUENCE OF 27-117
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P01245;
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SOMA_HORSE
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                                                                                                                                                                                                                         4 TIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLGNPCTSLSFSFSTFT; S 63
                                                                                                                                                                                                                                                        29 IVPLSRLEDHAMLQAHRAGLAIDTYQEFEETYIPKDGKYSFLEBSGTSFCFSESIFTES 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               messenger RNAs.";
Endocrinology 129:2965-2971(1991).
-!-FUNCTION: Plays an important role to growth control. Its major
role in stimulating body growth is to stimulate the liver and
other lissues to scorete (GFT). It stimulates but, the
differentiation and proliferation of mychiasts, it also stimulature
amino acid uptake and protein synthesis in cuscle and other
                                                                                                                                                                   Gaps
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Mammalia, Etheria, Rodestia, Sciurognathi, Muridus, Criceliae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIATE-52063850; PubMed-1954881;
Southard J.N., Sanchez-Jimenez F., Campbell G.F., Talamantes F.,
"Sequence and expression of hamster prolactin and growth hormone
                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39.0%; Score 310.5; DB 1; Length 216; 67.0%; Pred, No. 2.56-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Serretent, SIMILARITY: BELONGS TO THE SOMATOTROPIN/PEOLACTIN FAMILY.
                                                                                                  Length 217;
                                                                                                                                                               Indeis
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BY SIMILARITY.
BY SIMILARITY.
3869CE32A56F116E CRC54;
   136 SDD -> BBS (1N REF. 9).
25020 MW; 235BQDC7A713F431 CRC64;
                                                             47.8%; Score 381; DS 1; i.e
82.0%; Pred. No. 3.26-30;
Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16:
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01-0CT-1994 (Rel. 30, Last soquence update)
28-FEB-2003 (Rel. 41, Last annotation opdate)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216 A.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Somatotropin precursor (Growth hormone).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mesocricetus auratus (Golden hamster).
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PROSITE: PS00266; SOMATOTROP.N.;; 1.
PROSITE: PS00338; SOMATOTROP.N.2; 1.
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134 1
217 AA;
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P37886;
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                           SEQUENCE
   CONFLICT
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"Structural Studies of tryptic peptides from large cyanogen bromide fragments of set whale (Balaincelera borealis) somatotropin.";

Eigenetis of set whale 1599(198).

"Town on the set of the set of the set of the set of the liver and other tissues to secrete 168°. It simulates both the differentiation and proliferation of myoblasts. It also stimulates
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Salaenoptera borcalis (Sei whale).
Bukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi;
Marmalia: Eutheria: Cetartiodactyla: Cetacca; Mysticcti;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid uptake and protein synthesis in muscle and other
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-:- SUBCELIGLAR LCCATION: SECTETEG.
-:- SIMICARITY: BELONGS TO THE SOMATOTROPIN/PROLACTIN FAMILY.
PIR: PNG/40: PNG/40:
RSSF: PGL241; JAXI.
InterPro: JPRC04460; Somatotropin.
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BY SIMILARITY.

09FBFF6DB14A75D6 CRC64;
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Blokbimila 47:1059-1069(1982).
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                                                                                                                                                                                                                                                                                                                                  01-00T-1993 (Rel. 27, Created)
01-00T-1993 (Rel. 27, Last sequence update)
12E-FEB-2003 (Rel. 41, Last annotation update)
Sommatotropin (Growth hormone).
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01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2063 (Rel. 41, Last annotation update)
                                                                                                              86 PIGKEEAQQRSDMELLRESLLIQSWLGPVQ 116
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                                                                                                                                                                                                                                                                             190 AA
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                                                                             62 PSNREETQQKSNLELLRISLLLIQSWLEPVQ
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PROSITE, PS00266; SOMATOTROFIN_1; 1.
PROSITE; PS00338; SOMATOTROFIN_2; 2.
                                                                                                                                                                                                                                                                             PRT;
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MEDLINE-83000569; PubMed:7115813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Balaenopteridae: Balaenoptera.
NCBL_TaxiD-9768;
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                                                                                                                                                                                                                                                                             STANDARD;
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MEDLINE-74020362: PubMed-4747845;
MEDLINE-74020362: PubMed-4747845;
Zakin M.M., Poskus E., Deliacha J.M., Paladini A.C., Santose J.A.,
The amino acid sequence of equine growth hormone.";
PPHS Lett. 34:353-355(1973).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 68-95 AND 183-216.
Zakin M.M., Poskus E., Dellacha J.M., Paladini A.C., Santume J.A.;
"Amino acid sequences around the cystine residues in equine drowth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oliver L., Hartree A.S.;
"Amino acid sequences around the cystine residues in horse growth
                                        Squus caballus (Horse).
Bukaryota, Metazoa: Chordati, Craniata: Vertebratu: Buteleosiomi;
Mammalia: Butheria: Perissofactyla; Equidae: Equis.
                                                                                                                                                                                                                                                                                                                                       MEDLINE-77905410: PubMed-965151;
Zakin M.W., Poskus E., Langton A.A., Ferrara i., Santonic C.A., Dellacha J.M., Patadiri A.C., "Primary structure of equine growth bormore.";
Primary structure of equine growth bormore.";
Int. 3. Popt, Protein Res. 3:435-444(1976).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
SIMILARITY: HELONGS TO THE SCHATOIRCPIN/FROIACIIN FARTIY.
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                                                                                                                                                                                TISSUE=Pituliary,
MEDJINE=94266171; PubMed-8276392;
Ascacio-Martinez J.A., Barrara-Saidana H.A.;
Ascacio-Martinez D.A., Barrara-Saidana H.A.;
Gene 143:299-300(1994);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38.5%; Score 306.5; D5 1; 65.2%; Pred. No. 6.2e-23;
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Somatotropin predursor (Growth hormone)
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PROSITE: PS00266; SOMAIOTROFIN_1; 1.
PROSITE; PS06338; SOMATOTROFIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPRS01400; Somatofropin.
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MEDLINE-68368390; PubMed-48°6100;
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SIGNAL 1 26
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FEBS Lett. 25:77-82(1972).
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                                                                                                              NCBI_TaxID=9796;
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206
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This SWISS-PROI entry is copyright. It is produced through a collaboration between the Swiss institute of Bioinformatics and the EMBL outstation fits European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
2 FPTIPLSRLFDNAMIRARRIHQLAFDTYOGFBEAYIPKEQKYSFLONPQISLSFSFSIPT 61
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Eukaryota, Metazoa: Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia; Eutheria; Primates, Strepsirhini; GalagonIdae; Galago.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELCNGS TO THE SOMATOTROPIN/PROLACTIN FAMILY
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ZFB61CD31136F0G5 CRC64:
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                                                                                                                                                                                                                                                                  28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Schatotropin precursor (Growth hormone).
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14; Mismatches
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                                                             62 PSNRESTOOKSNLELLRISTLLIQSWLEPVQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PROGRES; SOMATOTROPIN,
PROSITE; PSO0266; SCMATOTROPIN_1; 1.
PROSITE; PSO0338; SCMATOTROPIN_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
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InterPro: IPR091406; Somatotropin.
Pfam, PF02163; hormone; 1.
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HSSP: P01246: 1851.
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217 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYOHFEEAYIPKEQKYSFLQNPQTSLSFSFS;PT 6]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -:- SUBCELLULAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE SOMATOIROPIN/PROLACIIN FAMILY.
                                                                                                                                                                                                                                                                 It also stimulates
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                                                                                                                                                                              Wallis O.C., Zhang Y.P., Wallis M.; "Cloning and characterisation of the gene encoding slow loris growth
                                                                                                                                                                                                               Submitted (AUS-2005) to the EMBL/GenBank/TOBU ditabases.
-1- FUNCTION: Plays an important role in growth control. Its majer role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulate amino acid uptake and protein synthesis in muscle and other
                                                                                               Nycticebus pygmaeus (Pygmy słow loris).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostumi,
Mammalia, Eutheria, Primates, Strepsirhini, Loridae, Nycticebus.
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BY SIMILARITY.
BY SIMILARITY.
7PESCETTESSONSI'S CRCS4.
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65,2%; Pred. No. (,2e*23;
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01-JAN-1988 (Rel. 06, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Somatotropin precursor (Srowth hormone).
                                        28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
58-FEB-2003 (Rel. 41, Last annotation update)
Somatotropin precursor (Growth hormone)
                   217 AA
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                   PRT:
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Pfam: PF00103; hormono: 1,
PRINTS: PR00836; SOMATOTROPIN,
                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AJ297562; CACG3504.1; -.
HSSP: P01246; 18ST.
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Best Local Similarity 65.23;
Marches 60; Conservative
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                   STANDARD;
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190
215
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SEQUENCE FROM N.A.
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207
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P06880;
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SEQUENCE
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SOMA_MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: This an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete 10F-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other
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                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE-82561368; PubMed=2991252;
Linzar J.I.H., Talamantes F.;
Nuc.cotide sequence of muse prolactin and growth hormone mRKAs and expression of these mRNAs during pregnancy.";
J. Biol. Chem. 260:9574-9579(1985).
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                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STAA.N-FOZDU: TISSUS-Liver;
MEDLINE-96:94803: PubMed-3647448;
Das P., Meyer L., Seyfert H.-M., Brockmann G., Schwerin M.;
"Structure of the growth hormone-encoding gene and its promoter in
Mus musculus (Mouse).
Eukaryota: Metazoa: Chordata: Cramiata: Vertebrata; Euteleostomi;
Mammalia: Eutheria: Rodentia; Sciurognathi; Muridae: Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38.2%; Score 304.5; DB 1; Length 216; 64.8%; Pred. No. 9.7e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -:- SUNCELLULAR LOCATION: Secreted.
-:- SIMILARITY: BELONGS TO THE SOMATOTROPIN/PROLACIIN FAMILY
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PR02TE; PS00266; SOMA-OTROPIN_1; 1.
PF05TE; PS00338; SOMATCTROPIN_2; 1.
HOFMONE; Pitultary; Signal.
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HSSP; P01246; 1BST.
MG19270; GP.
InterPro; IPR001400; Somatotropin.
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Computer
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### ALIGNMENTS

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Mammalia: Eutheria; Primates; Platyrrhini: Cebidac; Atelinae; Ateles.
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REVOL A.. ESquive, L., Santiago D., Barrera-Saldana H.:

"Independent dupilection of the growth hormone gene in three
Anthropoidean lineages."

SCHELLE APAY 2001, to the EMBL/GenBank/DDBC databases.

EMBL: AFAY 4234, AAL7286.1;

InterPro: IPR001400; Schatotropin.

Promite Pro: IPR001400; Schatotropin.

Promite PS00266; SOMATCTROPIN.1; 1.

PROSITE: PS00368; SOMATCTROPIN.2; 1.

PROSITE: PS00388; SOMATCTROPIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54.7%; Score 436; DB 5; Length 217; 66.9%; Pred. No. 1.4e-38;
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                                                                                                                                                              01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 26, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                   Ateles geoffroyi (Black-handed spider monkey)
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                                                                                      PRELIMINARY;
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Host Lonal Similarity
Matches 97: Conserv
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RESULT 1
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                                                        InterPro; IPR001400; Somatotropin.
Pfam: PF00103; hormone: 1.
PR052TE; PS00266; SOMATOTROPIN_1; 1.
SEQUENCE 217 AA; 24874 MW: FIEB66
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Endocrinology 133:1744-1752(1993).
EMBL; L16554: AAA18841.1: -.
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Matches 82: Conservative
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                                            HSSP; P01241; 1AXI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SECUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IISSUE-Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NON_TER
                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                007368;
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Q07367
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QU7368
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 FPTIPLSRAFDNAMURAHRLHQLAFDTYQEFERAYIPKBJKYSFLONHQTSLSFSESIPT ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 HILL THE SELFONAMERARHING LATE THE THE THE STEED OF SELFCENTERS.
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MEDLINE-94008724; PubMed-3404617;
Golos T.G. Durhing M., Fisher J.M., Fowler F.D.;
"Cloning of four growth hormono/chorionic somatomarmotropin-related complementary decoxyribonuclate acids differentially expressed diring pregnancy in the rhesus monkey placenta.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning of two novel growth hormone transcripts expressed in human placenta.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Eutelcosiomi:
Mammalia: Eutheria: Primates: Catarrhini: Cercopitiecidae;
                                                                                                                                                                                                                                                                                                                         Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Duteleoscomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae: Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUB-Term placenta;
MEDLINE-983737; Potenta-9703963;
Hoguszewski C.L., Svensson P.A., Jansson T., Clark K.,
Carisson J.M.S., Carisson B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIĞNAD 1 26 POTENTIAL.
SEQUENCE 245 AA: 27101 MW: 14CC7F8CD75091C8 (PR164).
                                                                                                                                                                                                          01-JAN-1996 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
Placental growth hormone isoform hGH-V3 precursor.
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01-NOV-1996 (TERMELGEL. 01, Last sequence update)
01-NAR-2003 (TERMELGEL. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 53.5%, Score 427.5; D8 4; Best Local Similarity 71.9%, Pred. No. 1.24-37; Matches 92; Conservative 6; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J. Clin, Endocrinol, Metab. 83:2878-2865(1998),
EMBL: AF006051; AAB71829.1, ...
85SP: P61241; IA22,
InterPro: IPR01450; Somatot:opin.
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                                                                                                                                          245 AA
                 146 GIGTLMGRIEDG---SPOTGEIFRG 167
                                                                                                                                                                               01-JAN-1998 (TrEMBLrel. 05, Sreated)
01-JAN-1996 (TrEMBLrel. 05, Last sequ
01-DEC-2001 (TrEMBLrel. 19, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam, PF00103, hormone, 1.
PROSITE, PS00266, SCMAIUTROPIN_1, 1.
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                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
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                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                   RESULT 2
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                                                                                                                                                                                                3 PTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPTP 62
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                                                                                                                                                                                                                                   28 PSVPESRLFDNIMMQAHRLHQLAFDTYQEFEKTYIPKEKKHSLMGNPQASFCFSESIPTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-94008724; PubMed-8404617; Golos T.G., Durning M., Fisher J.M., Fowler P.D.; Golos T.G., Durning M., Fisher J.M., Fowler P.D.; Colos T.G., Durning M., Fisher J.M., Fowler P.D.; Complementary Geoxytthonucy-chorinonic sematomamotropin-related pregnancy in the rhesus monkey placenta."; Endocrino.cgv 133:1744-1722(1993).

Endocrino.cgv 133:1744-1722(1993).

ENBL: L16553; AAA18340.1; ...

InterPro: IPR004400; Somatctropin.
                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                   63 SNREETQQKSNLSLLRISLLLIQSWLEPVQLGTGPRFVNQHLCGSHLVEALYLV 116
                                                                                                                                                                                                                                                                                                                                                                   Bukaryota, Metażoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Butheria, Primates, Catarrhini, Cercopithecidae,
Cercopithecinae, Macaca.
                                                                   DB 6; Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 212;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-NOV-1996 (TrEMBLrel. 01, Created)

21-NOV-1996 (TrEMBLrel. 01, Last sequence update)

31-MAY-2003 (TrEMBLrel. 23, Last annotation update)

Somatotropin 2 precursor (Growth hormone 2) (Fragment).

Macaca mulatta (Rhesus macaque).
24874 MW; FIEB6AFDBBAIB185 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212 AA; 24525 MW; 27BC91106256E6F5 CRC64;
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01-NCV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                51.1%; Score 407.5; DB 6; 71.9%; Pred. No. 1.6e-35; tive 12; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oucry Match 49.7%; Score 396; DB 6; L
Sest Local Similarity 92.2%; Pred. No. 2.6e-34;
Matches 74; Conservative 11; Mismatches 5;
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Best Local Similarity
Matches 69: Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                73;
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
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014643;
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014643
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrEMBLrel. 0). Created)
01-NOV-1996 (TrEMBLrel. Cl. Last Sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Chorionic somatomamotropin CS-2 (Chorionic somatomammotropin hormone
                                                                                                                                                                                                                                     MEDLINE-94008724; Pubkad-9404617; REDLINE-94008724; Pubkad-9404617; GGLOS T.G., Durning X., Fisher J.M., Powier P.D.; Cloning of four growth Hormone/Ghoric somatrhmannot.ropin.rolated complementary deoxyribonuclete acids differentially expressed granny pregnancy in the thesis monkey placetta."; EMBC: IL6522; AAA18839.13; F. EMBC: IL6522; AAA18839.13; F. EMBC: IL6523; F. EMBC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34158
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MEDLINE-89307277; PubNed-2744763;
Chen E.Y., Liao Y.C., Smith D.H., Barrera-Saldana H.A., Gelinss N.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "The human growth hormone locus: nucleatide sequence, blology, and evolution.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vnencak-Jones C.L., Phillips J.A. 111.; "Not sports for growth hormone gene deletions in homologous regions outside of Alu repeats.";
                             Eukaryota: Metažoa: Chordatā: Zraniata: Verrebrutu: Euteleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Cerroputheeidae:
Cercopitheeinae: Macaca.
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Mammalia, Eutheria, Primates, Catarrhimi, Hominidae, Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg R., submitted (JUL-2002) to the EMBL/GenBank/DD6J Jatabases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PROGRAG SONATOTROPIN.
PROSITE: PS00338: SOMATOTROFIN.2; 1.
SEQUENCE 217 AA: 24942 WW PPSAA9515131F2RG CRC64:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ouery Match 49.7%; Scord 356; DB 6;
Best Local Similarity 62.2%; Pred. No. 2.7~*34;
Matches 74; Conservative i.: Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88 SNLEETQQKSNLELDRISLLIQSWLEPVQ 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63 SNREETQQKSNLELLRISLLLLQSWLEPVQ 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPRC01400; Schatot.opin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=91102558; PubMed=1980158;
Macada mulatta (Rhesus madagie)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Science 250:1745-1748(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam: PFC0133; hormone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP: PC1241; LAXI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IISSUE-Placenta:
                                                                                                                                          NCBI_TaxID-9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 FPTIPLSRLFDNAMLRAHRLHOLAFDTYQEFEEAYIPKEOKYSFLCNPQTSLSFSESIPT 61
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Mammalia: Eutheria; Primates; Platyrrhini; Cebidae; Atelinae; Ateles
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Revol A., Esquivel D., Santiago D., Barrera-Saldana H.:
"Independent diplication of the growth hormone gene in three
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length: 217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14; Indels
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Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases EMBL; AF374235, AAL72287.1;
LitterPro: IPR001400; Somatotropin.
PROBLIE; PR00836; SOMATOTROPIN.]
PROSITE; PR00836; SOMATOTROPIN.]; 1.
PROSITE; PS00266; SOMATOTROPIN.]; 1.
SROUGHUE: 217 AA; 25293 MW; 741745AlB75C053E CRC64;
EMBL, 203071: AAA5253.1: -.
EMBL, BC022044: AAH22041.: -
EMBL, BC022045: AAH3265.1.: -.
HSSP, P0124: 1A22.
HSSP, P0124: DA2.
HSSP, P0134: DA2.
HSSP, P0124: DA2.
HSSP, P0124: DA2.
PFINIS: PROB36: SCMATGTROPIN.
PROSTTE: PS00266: SCMATGTROPIN.
PROSTTE: PS00
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C1-MAR-2002 (TrEMBLrel. 26, Last sequence update)
C1-OCT-2002 (TrEMBLrel. 22, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-0AN-1998 (Trammirel. 05, Created)
01-0AN-1998 (Trammirel. 05, Last sequence update)
01-0UN-2062 (Trammirel. 21, Last annotation update)
Placental growth hormone 20kDa isoform precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : 47.8%; Score 381; 53.4; L
Similarity 82.0%; Pred. No. 1.1e-32;
3; Conservative 8; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43.7%; Score 348; DB 6; 75.6%; Pred. No. 3.7e-29;
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TISSUE-Liver;
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070615
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 PTIPLSRIFDNAMERAHRLHQLAFDIYQEFEEAYIPKEQKYSFLQNPQISLSFSESIPTP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryotu: Metazoa: Chordata Craniatu: Vortobiato, Eutoloostonu:
Mammalia: Euthoria: Primates Flanyrrbini: Callitrichidae: Callibaix
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                                                                                                                                                                                          TISSUE-Term placenta:
MEDLINE-9887373; PubMed-9789963;
Boquezewski C.L., Svensson P.A., Jansson T., Clark K.,
Carlsson J.M.S., Carlsson B.;
"Cloning of two novel growth hormone transcripts expressed in numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Characterisation of the GH gene cluster in a new-world monkey, ton-marmoset (calibhriz) Jacchus.";
Ju. Mol. Eddocrinol. 916-0(2002).
EMBL, AJ489811; CAD34012.1;
InterPro: PRF001400; SomatoLropin.
Pfam: PF00103; hormone. ...
PRINTS; PR00836; SOMATOTROPIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72 PSNRVKTOOKSNJELLETSIJLIOSWLEPVOJEKSVFANSLYYGASDSNVYRHIJ 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 PSNREETQOKSNLELLRISHLLIQSWLEPVQL------GTGPRFVNQHL 104
                                    Craniala, Vertebrata, Euteleostori,
Catarrhici, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 40.5%; Score 322.5; DB 6; Length 217; Best Local Similarity 64.7%; Pred. No. 2e-26; Matches 66; Conservative 13; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.8%; Score 341; UB 4; Longth 202; 65.8%; Pred. No. 1.9e-28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9: Indels
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01-0GT-2002 (TrEMBirel, 22, Last segmence update)
01-MAR-2003 (TrEMBirel, 23, Last senetation update)
                                                                                                                                                                                                                                                                                                                                                                                 J. Clin. Endocrinol. Metab. 83:2878-2895(1999)
EMBL; AF006660; AAB71828.1; ...
HSSP; P01241; 1A22.
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PROSITE; PS00266: SOMATOTROFIN.]; 1.
PROSITE; PS00338: SOMATOTROFIN.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00338; SOMATOTROP:N_2: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro: IPR001406; Somatotropin.
Pfam; PF00103; hormone; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL 1 26 F
SEQUENCE 202 AA; 23128 NW
                                 Eukaryota, Metazoa, Chordata
Mammalia, Eutheria, Primates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 26 2
27 217
217 AA; 25177 MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 65.8°
Matches 75; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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Wallis O.C., Wallis M.;
Homo sapiens (Human)
                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                   NCBI_Tax12-9606,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBL_TaxID 9483;
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Q8MI74
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2 PPTIPLSRLFDNAMIRAHRLHQLAFDTYQEFERAYIPKEQKYSFLONPQTSLSFSESIPT 61
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Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostoni;
Mammalia: Eutheria: Cetartiodactyla; Cetacea: Odontoceti: Delphinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maniou 2., Wallis O.C., Wallis M.; "Cloning and characterisation of the GH gene from the common dolphin (Delphinus delphis)."; Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.

EMBL, AJ492191; CAD37292.1; ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-99124645; PubMed-9924177;
Lioupis A., Nevo E., Wallis M.;
"Cloning and characterisation of the gene encoding mole rat (Spalax
                                                                                                                                                                                                                                                                                                                                                                                   Spalax leucodon ehrenbergi (Ehrenberg's mole rat).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Spalacinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               // Match 38.5%; Score 306.5; DB 11; Length 216; Local Similarity 65.9%; Pred. No. 10-24; nes 65; Conservative 13; Mismatches 17; Indels 1;
                            63 SNRRETOOKSNLELLRISLLLIOSWLEPVOLGTGPRFYNOHL 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GROWTH HORMONE. EEAB8A523BA0ADFF CRC64;
                                                                                                                                                                                                                                                               01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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01-00T-2002 (TrEMBLrel, 22, Last sequence update)
01-MAR-2003 (TrEMBLrel, 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Interpro: IPR001460; Somatotropin.
Pfam. PF60163; hormone; I.
PRINTS: PR00836; SOMATOTROPIN.
PROSITE: PS00266; SOMATOTROPIN. I.
PROSITE: PS00338; SOMATOTROPIN_2: I.
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                                                                                                                                                                                                            PRT;
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EMBL: AJOS819; CAA06716.1; -.
HSSP; PO1241; JAXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27 216 G
216 AA; 24627 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ehrenbergi) growth hormone.";
                                                                                                                                                                                                                                                                                                                                                       Growth hormone precursor.
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216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=30637;
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Best Local Similarity 63.7%
Matches 58; Conservative
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                                                                                                                                                                                                                                                                                                                                  Query Match
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ID 291
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                                                                                                                                                                                                                                                                                    34,53
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01-MAR-2003 (TrEMBLrel, 23, Last sequence update)
01-MAR-2003 (TrEMBLrel, 23, Last sequence update)
Growth hormone precursor.
Alluropoda melanoleuca (Siant panda).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleustomi;
Manmalia; Eutheria; Carnivoru; Fissipedia; Ursidae; Alluropoda.
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Mammalia: Eutheria; Rodentia; Sciurognathi; Muridae; Musinue: Mus
                                                                                                                                                                                                                                                                                 - -
                                                                                                                                                                                                                                 58 6; Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 37,8%; Score 301.5; 5% 6; Length 216; Best Local Similarity 64.8%; Pred. No. 3.40-24; Matches 59; Conservative 14; Mismatches 17; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUE-FRIGHTARY;
TISSUE-FRIGHTARY;
"Closing and expression of cDNA encoding growth hormone from Aliuropoda melanolegea";
Aliuropoda melanolegea";
EMBL; AF$40936; AN77228.1; -...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIĞNAL 1 26 POTENTIAL.
SEQUENCE 216 AA; 24383 MW: 44EC1?EC44BCR656 CKC64;
                                                                                                                                                             27 216 GROWTH HORMONE.
216 AA: 24509 NW: 1E0467A84CCFEB02 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2000 (TrEMBLrel. 13, Created)
U-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation apdate)
Growth hormome.
                                                                                                                                                                                                         37.8%; Score 301.5; DB 6;
54.8%; Pred; No. 3.48-24;
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Best Local Similarity 64.8%; Prod. No. 1.40
Matches 59; Consurvative 14: Mismatches
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                       ## 11 | FEET | F
                                                                                                                                                                                                                                                                                                                                                                                                                    62 PSNREETQCKSNLELLRISTLLIQSWLEPVQ 92
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                                                                                                                                          POTENTIAL
                   Pfam: PF00103: hermone: 1.
PRINTS: PR00836: SOMATCHF0FIN.
PROSTITE: PS02266: SOMATCHF0FIN. 1.
PROSTITE: PS09348: SOMATCHF0FIN.
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InterPro; IPR001400; Scmatotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY:
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                                                                                                                                                                                     SEQUENCE
                                                                                                               Signal.
SIGNAL
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                                                                                                                                                               CHAIN
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QBHYE5
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Q9R2C3
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2 FPTIPLSRLFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTSLSFSESIPT 61
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EMBL: C49065; Aac48679.1; -
ISSP: P01241; 1AXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Piacental growth hormone (Fragment).
Ovis aries (Sheep).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostoni,
Mammalia, Butheria, Cetartiodactyla, Ruminantia, Pocora, Bovoldea,
Bovidae, Caprinae, Ovis.
SEQUENCE FROM N.A. Niebhaber S.A.: Nguyon T.N.K., Liebhaber S.A.: "Mcuse Growth Hormone Locus: Nucleotide Sequence and Phylogenetic
                                                                                                                                                                                                                                                                                                                                                                                                                      37.5%; Score 298.5; DB 11; Length 216; 63.7%; Pred. No. 7.2e-24; ative 14; Mismatches 18; Indels 1;
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                                                                                         Analyses.":
Submitted (AUG-1995) to the FMBL/GenBank/DDBJ databases
                                                                                                                                           EXEL; U34362; AAC99988.1; -.
HSSP: P01241; 1AX1.
In.eFPT0; IPR001406; Somatotropin.
Figure: FF00103; hormone: 1.
PRINTS; PR00836; SOMATOTROPIN.
PROSITE; PSC0266; SOMATOTROPIN.
PROSITE; PSC0265; SOMATOTROPIN.2; 1.
PROSITE; PSC0388; SOMATOTROPIN.2; 1.
SEQUENCE 216 AA; 24682 MM; FC2A06DAC2536B18 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE 204 AA; 23462 MW; EBBB9451892635C6 CRC64;
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Last annotation update)
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01-FEB-1997 (TrEMBLrel, 52, Last seq:
01-MAR-2003 (TrEMBLrel, 23, Last anno
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
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Pfam: PFC0103; hormone; 1.
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MEDLINE-97050633; PubMed-8895361;
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01-0CT-2000 (TrEMBLroi. 15, (reated)
01-0CT-2000 (TrEMBLroi. 15, Last. sequence update)
01-MAR-2003 (TrEMBLroi. 13, Last. annotation update)
01-MAR-2003 (TrEMBLroi. 23, Last. annotation update)
Growth hormone precursor.
Cavia porcellus (Guinea pig).
Cavia porcellus (Guinea pig).
Mammalia: Butheria: Rodentia: Hystricognathi: Caviadas; Cavia.
MCBI_Taxib=10141:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 37.3%; Score 297.5; EB 11; Length 216; Best Local Similarity 63.7%; Pred. No. 9.2e-24; Matches 58; Conservative 14; Mismatches 18; Indels 1;
                                                                                                                                                                                                          SEQUENCE FROM N.A.
Odorico D.M., Fuller F.C., Herington A.C.;
Cloning and sequence of quirea pig growth hormone (GR).";
"Cloning and sequence of the SWBL/Genhauk/UDBH databases.
EMBL: AF233853, AAF356409.1;
HSSP; P01241; 1AXI.
                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
GROWTH HORMONE.
45996BEll9B08DD3 CRC64:
  216 AA
                                                                                                                                                                                                                                                                                                                          InterPro: IPR001400; Somatotropin.
Pfam: PF00103; hormone; 1.
PRINTS: PR00836; SOMATOTROPIN.
PROSITE: PS00266; SOMATOTROPIN.
PROSITE: PS00338; SCMATOTROPIN.
  PRT;

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        SRQUENCE
        215 AA:
        24822 MW;

PRELIMINARY;
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                    Q9JKM4;
Q9JKM4
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Search completed: September 16, 2003, 12:40:01 Job time : 37:1868 secs